INSTRUCTION MANUAL

RESPTZ37-1

REVO ELITE
37x SPEED DOME CAMERA

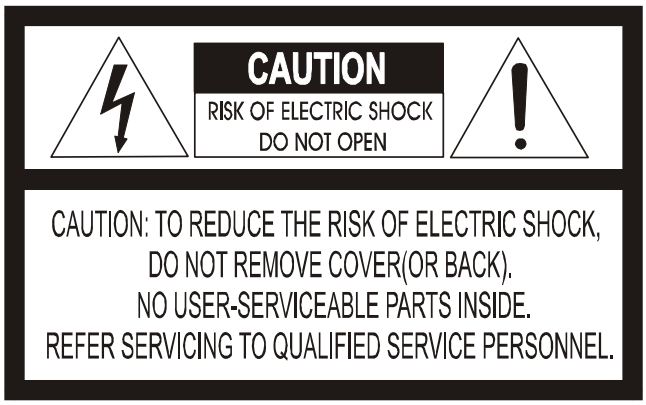
Please read this manual thoroughly before use, and keep it handy for future reference.

Warnings and Cautions

WARNING

TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS PRODUCT TO RAIN OR MOISTURE. DO NOT INSERT ANY METALLIC OBJECTS THROUGH THE VENTILATION GRILLS OR OTHER OPENINGS ON THE EQUIPMENT.

CAUTION



EXPLANATION OF GRAPHICAL SYMBOLS

The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instruction in the literature accompanying the product.

FCC COMPLIANCE

FCC INFORMATION: THIS EQUIPMENT HAS BEEN TESTED AND FOUND TO COMPLY WITH THE LIMITS FOR A CLASS A DIGITAL DEVICE, PURSUANT TO PART 15 OF THE FCC RULES. THESE LIMITS ARE DESIGNED TO PROVIDE REASONABLE PROTECTION AGAINST HARMFUL INTERFERENCE WHEN THE EQUIPMENT IS OPERATED IN A COMMERCIAL ENVIRONMENT. THIS EQUIPMENT GENERATES, USES, AND CAN RADIATE RADIO FREQUENCY ENERGY AND IF NOT INSTALLED AND USED IN ACCORDANCE WITH THE INSTRUCTION MANUAL, MAY CAUSE HARMFUL INTERFERENCE TO RADIO COMMUNICATIONS. OPERATION OF THIS EQUIPMENT IN A RESIDENTIAL AREA IS LIKELY TO CAUSE HARMFUL INTERFERENCE IN WHICH CASE THE USER WILL BE REQUIRED TO CORRECT THE INTERFERENCE AT HIS OWN EXPENSE.

CAUTION: CHANGES OR MODIFICATIONS NOT EXPRESSLY APPROVED BY THE PARTY RESPONSIBLE FOR COMPLIANCE COULD VOID THE USER'S AUTHORITY TO OPERATE THE EQUIPMENT.

THIS CLASS A DIGITAL APPARATUS COMPLIES WITH CANADIAN ICES-003.

CET APPAREIL NUMÉRIQUE DE LA CLASSE A EST CONFORME À LA NORME NMB-003 DU CANADA.

CE COMPLIANCE STATEMENT

WARNING

THIS IS A CLASS A PRODUCT. IN A DOMESTIC ENVIRONMENT THIS PRODUCT MAY CAUSE RADIO INTERFERENCE IN WHICH CASE THE USER MAY BE REQUIRED TO TAKE ADEQUATE MEASURES.

IMPORTANT SAFEGUARDS

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that product heat.
9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong is provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
11. Only use attachments/accessories specified by the manufacturer.
12. Unplug this apparatus during lightning storms or when unused for long periods of time.
13. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
14. CAUTION - THESE SERVICING INSTRUCTIONS ARE FOR USE BY QUALIFIED SERVICE PERSONNEL ONLY. TO REDUCE THE RISK OF ELECTRIC SHOCK DO NOT PERFORM ANY SERVICING OTHER THAN THAT CONTAINED IN THE OPERATING INSTRUCTIONS UNLESS YOU ARE QUALIFIED TO DO SO.
15. Use Certified/Listed Class 2 power supply transformer only.

Table of Contents

Chapter 1 — Introduction

1.1 Features

The REVO TRAX dome camera and the keyboard controller make up the building blocks for any surveillance/security system. Using multiple Keyboard Controllers and multiple dome cameras, no place is too large for monitoring. Extensible and flexible architecture facilitates remote control functions for a variety of external switching devices such as multiplexers and DVRs.

- Built-in optical power zoom camera with True Night Shot function.
- 240 Preset positions.
- 8 Tours consist of Preset, Pattern, Auto-Scan and other Tours can be programmed with over 300 functions and Preset location. While moving, each Preset scan can be watched in smooth **Vector Scan** mode.
- 16 Auto Scans with the normal, the vector, and the **random** mode and the Endless Auto-Pan with 13 speed steps.
- 8 Patterns (up to 500second) and 8 Privacy zones.
- 16 Area Titles.
- 8 Alarm inputs / 4 Aux outs (NC & NO).
- Variable speed from 0.1°/sec to 380°/sec.
  Three Variable speed (SLOW, NORMAL, TURBO)
  Turbo speed is Max 380°/sec with Ctrl key pressed.
- Pan / Tilt speed is inversely proportional to the zoom ratio with the option.
- Maximum speed is 380°/sec when preset command.
- Auto Calibration from 0.1° to 6° (Tilt range is 0° to 180°).
- Programmable user preferences (alarm, preset, title, etc.).
- 180° Digital Flip or 90° Auto Flip depended on the model.
- Up to 999 selectable camera addresses (3999 by software setting).
- Multi-language Menu Display, Password Confirmation.
- Function Run menu using DVR without function key (Pattern, SCAN,..)
- Built-in RS-485/422 receiver driver.
- Optional Clear bubble with black liner (shelter) for concealing the camera.
- Optional Tinted Bubble, Indoor & Outdoor pendant housing with heater & blower, Indoor Flush mount, Parapet mount & Roof Top mount.

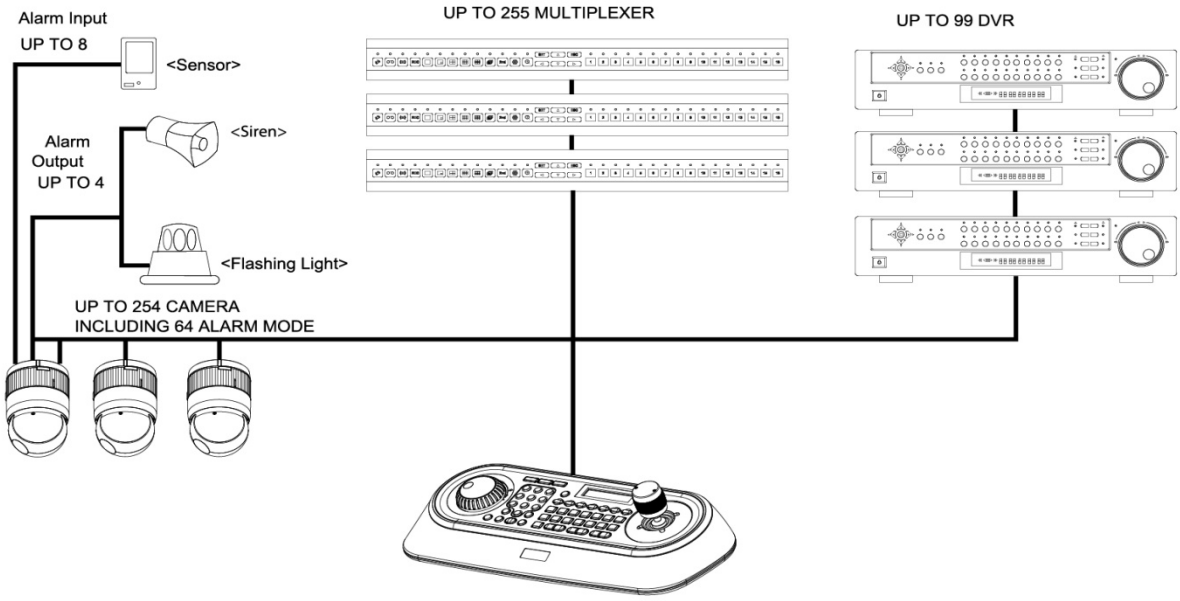


Figure 1 – Typical System Configuration

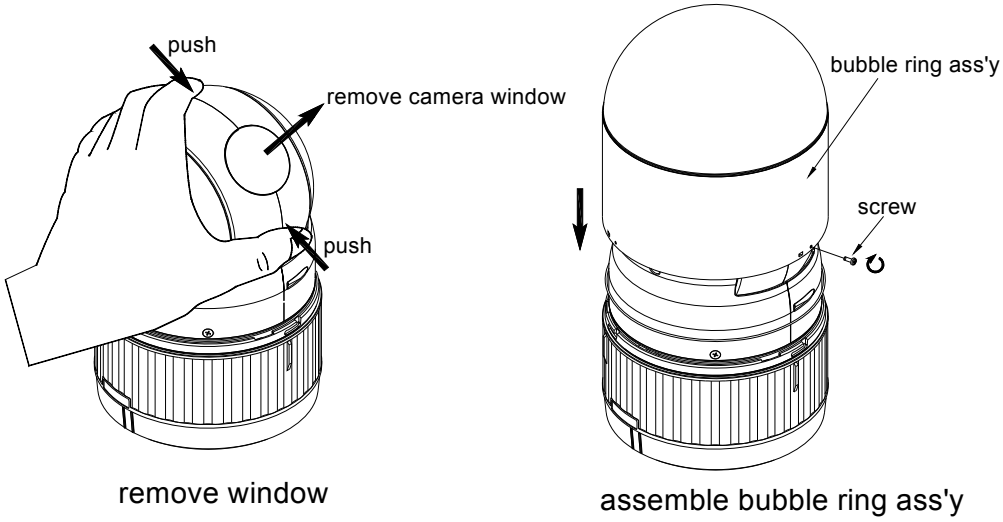


Figure 2 –Assemble bubble ring ass'y (Optional)

Note: It is recommended to remove camera window for improving picture quality when you use bubble ring ass'y.

CAUTION : When installing a REVO TRAX dome on a high pole outside, caution should be taken to avoid vibration and shaking of REVO TRAX dome due to wind load or shock of passing heavy vehicles. If pole is not stable enough, it may cause malfunction in accurate tilt positioning.

Chapter 2 — Installation and Configuration

2.1 Package Contents

The package contains the following.

REVO TRAX (Dome Camera)	……1
Bubble Ring	……1(Optional)
Instruction Manual (This Document)	……1
Assembly Screws for Attaching REVO TRAX	……3
Plastic Anchor	……3
10Pin Connector	……1
12Pin Connector	……2

CAUTION: Be sure to have caution labels (E version only) on both the body and the base of the camera. Different version will not support input and output.

The dome camera is for use in surface mounting applications and the mounting surface should be capable of supporting loads up to 10lb (4.5kg).

The dome camera's base should be attached to a structural object, such as hard wood, wall stud or ceiling rafter that supports the weight of the dome camera.

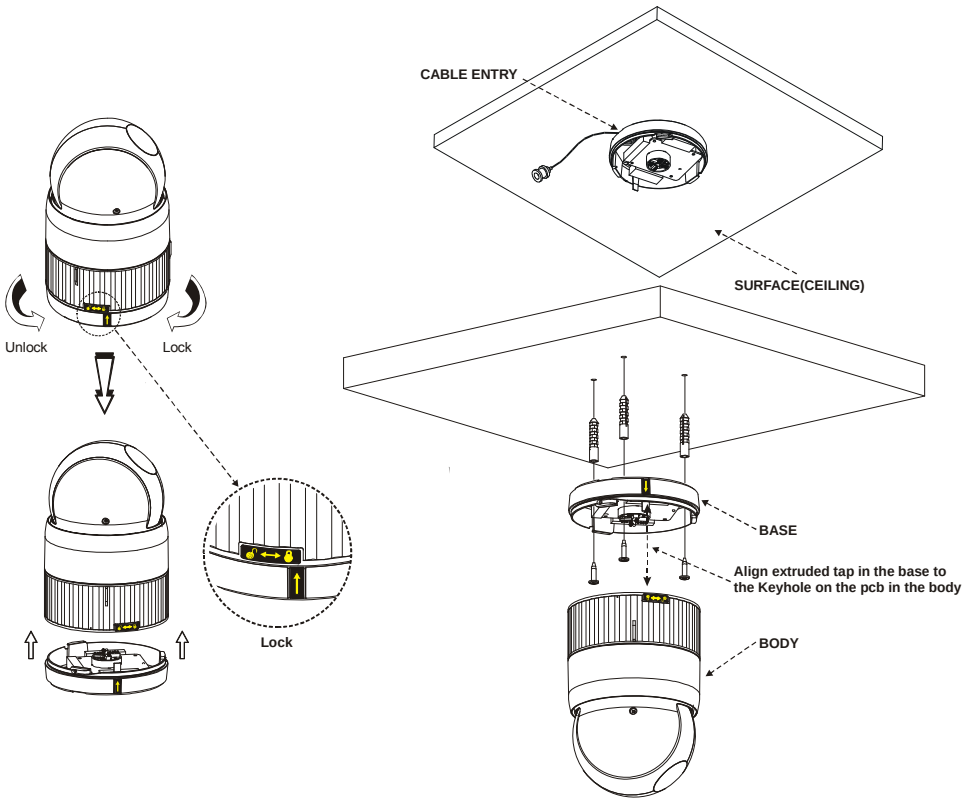


Figure 3 – Installation

2.2 Basic Configuration of REVO TRAX Dome Camera System

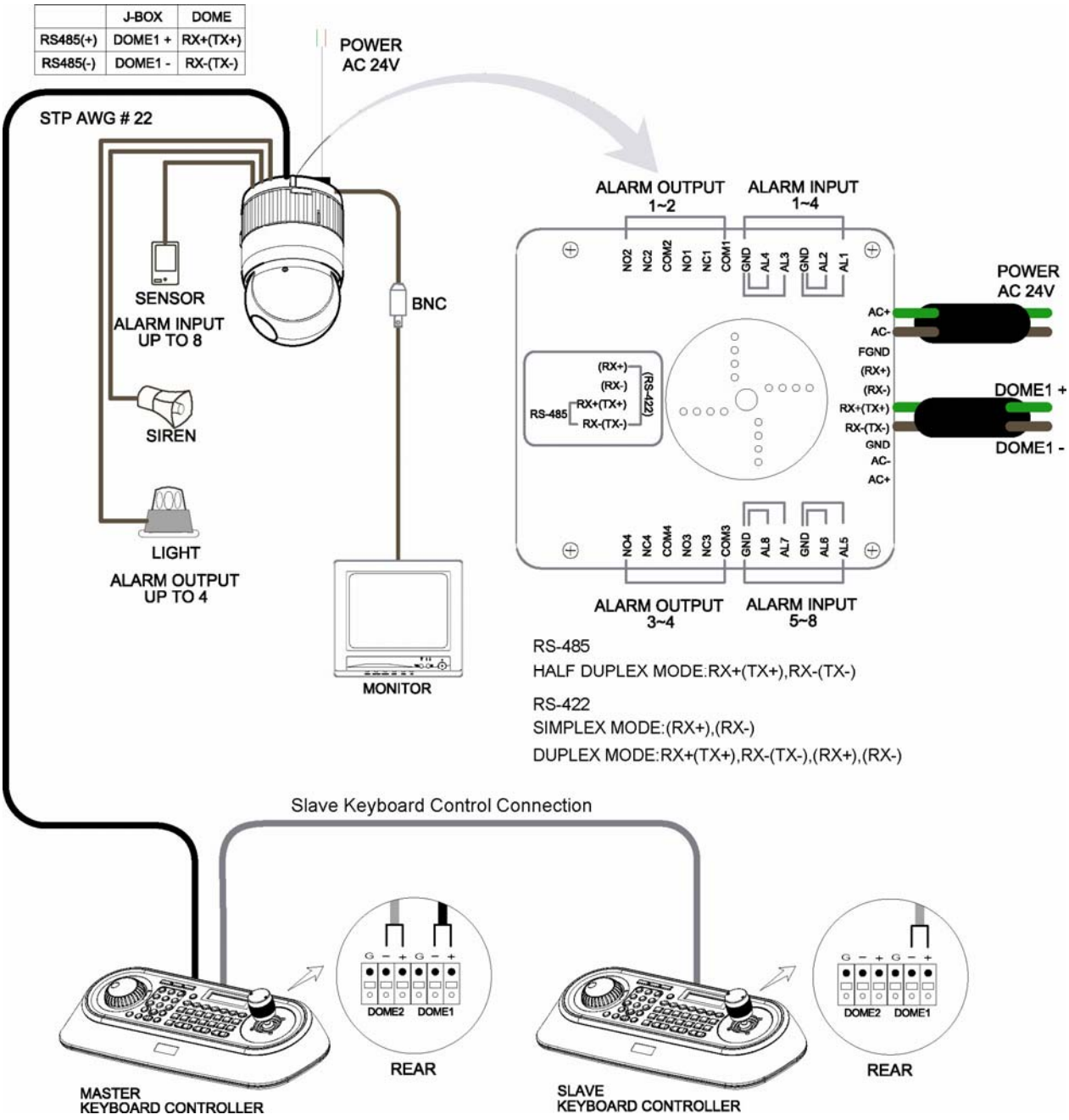


Figure 4 – Basic installation diagram

The dome camera must be installed by qualified service personnel in accordance with all local and federal electrical and building codes. The system should be installed according to Figures 4 through 9.

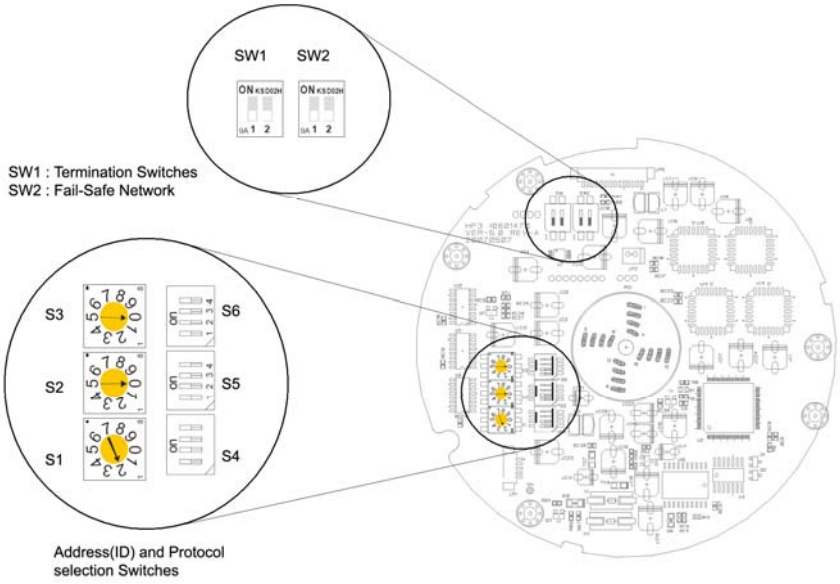
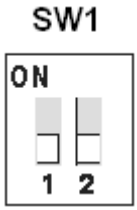


Figure 5 – Layout of Switches

2.3 Setting Dome Camera Termination

The device which is connected at end of line, whether it be a dome camera or keyboard controller, must have the cable for communication terminated by setting the appropriate DIP switch. Without proper termination, there is potential for control signal errors. Total length of the cable for communication should not exceed 4000ft (1.2km).



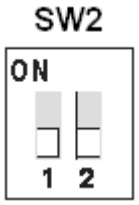
SW1	1	2
Terminated	ON	ON
Not terminated	OFF	OFF

Figure 6 – Setting Dome Camera Termination

2.4 Fail-safe Network

When you control the dome by the other device not own keyboard, some error may be existed in the serial communication. The reason is caused by the other device without the fail-safe network.

At this time, you solve the problem to set this DIP switch to ON of the nearest dome from the other device only.



SW2	1	2
ON	PULL-UP	PULL-DOWN
OFF	NONE	NONE

Figure 7 – Setting Dome Camera Termination

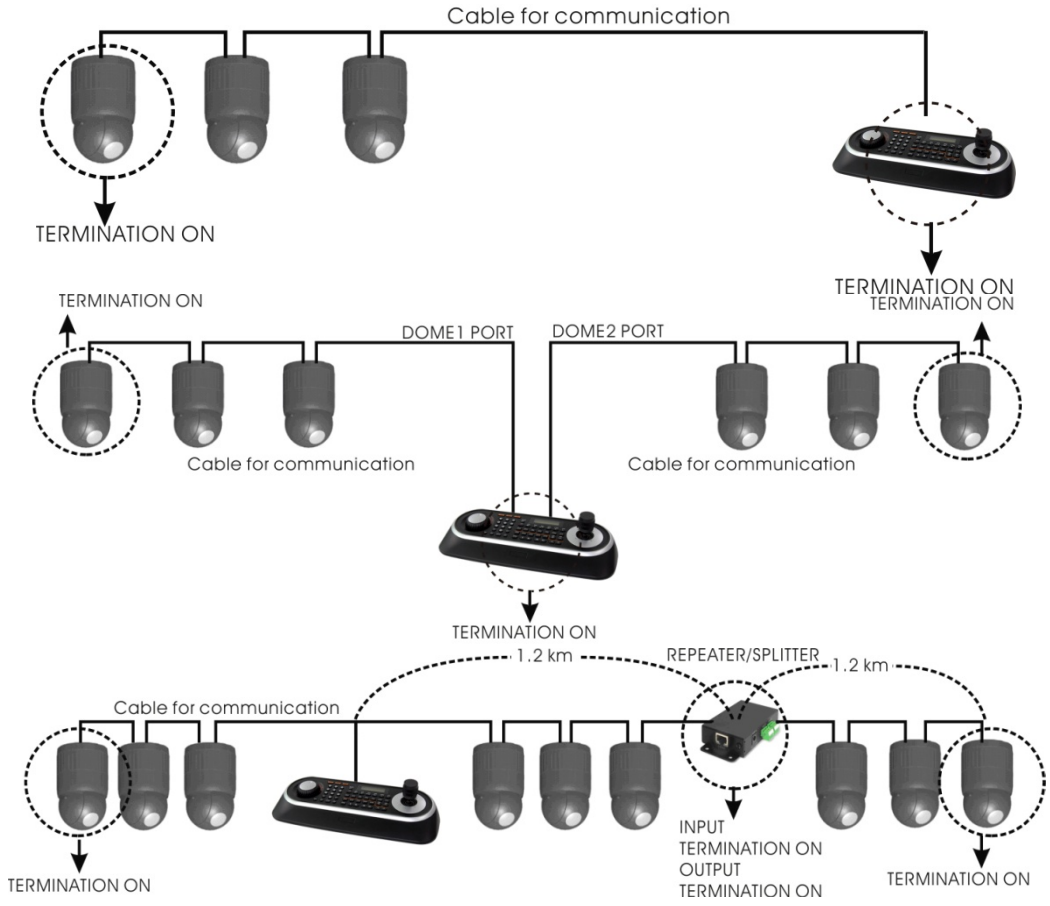


Figure 8- Termination Diagram

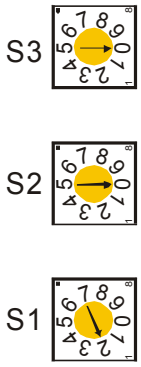
2.5 Setting Dome Camera Address (ID)

To prevent damage, each dome camera must have a unique address (ID). When installing multiple dome cameras using a multiplexer, it is suggested that the dome camera address match the multiplexer port number.

If you want to set the address more than 999, you should contact the service provider.

Example: Port 1 = Dome 1, Port 2 = Dome 2 … Port 16 = Dome 16. If more than 16 dome cameras are installed using two or more multiplexers, ID of the dome camera should be ID of MUX x No. of camera IN. (e.g. multiplexer ID= n, Camera IN= m then ID of Dome =16x (n-1)+m)

Refer to Figures 4-5 for setting the dome camera address (ID) and protocol selection.



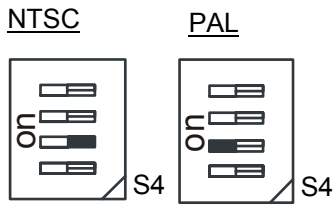
DOME ID	S3	S2	S1
1	0	0	1
2	0	0	2
.	.	.	.
999	9	9	9

Figure 9 – Setting Dome Camera Address (ID)

2.6 Setting Dome Camera Protocol

If a dome camera is to be installed with a keyboard controller,
select the default protocol.

Consult service personnel if a dome camera is installed with device other than a keyboard controller.



S/W		On	Off	**FUNCTION**
D1	S4-1	Enable	Disable	Alarm
D2	S4-2	PAL	NTSC	NTSC/PAL
D3	S4-3			Reserved
D4	S4-4	RS-422	RS-485	RS-422/RS-485

D5	D6	D7	D12	**PROTOCOL**
S5-1	S5-2	S5-3	S6-4	
Off	Off	Off	Off	F2,REVO TRAX, Pelco-D,Pelco-P:**default**
Off	Off	On	Off	F2,REVO TRAX
Off	On	Off	Off	Sensormatic RS422
Off	On	On	Off	Pelco-D, Pelco-P
On	Off	Off	Off	Vicon
On	Off	On	Off	Ernitec
On	On	Off	Off	Reserved
On	On	On	Off	F2
Off	Off	Off	On	Philips(Bosch)
Off	Off	On	On	Reserved
Off	On	Off	On	Dynacolor
Off	On	On	On	Reserved

D8	D9	D10	**BAUD RATE**
S5-4	S6-1	S6-2	
Off	Off	Off	2400 bps
Off	Off	On	4800 bps
Off	On	Off	9600 bps (Default)
Off	On	On	19200 bps
On	Off	Off	38400 bps

D11	**PARITY BIT**
S6-3	
Off	None
On	Even

Figure 10 – Protocol Selection Switches

2.7 Connections

• Connecting to the RS485/ 422

The dome camera can be controlled remotely by an external device or control system, such as a control keyboard, using RS485 half-duplex, RS422 full duplex or simplex serial communications signals. Connect Marked Tx+, Tx- to Tx+(Rx+) and Tx-(Rx-) of the RS485 control system.

If control system is RS422, connect Rx+(Tx+), Rx+(Tx-) and Rx+, Rx- of the dome camera to Rx+, Rx- and Tx+, Tx- of the control device respectively.

• Connecting Video out connector

Connect the video out(BNC) connector to the monitor or video input.

• Connecting Alarms

AL1 to 8 (Alarm In)

You can use external devices to signal the dome camera to react on events. Mechanical or electrical switches can be wired to the AL (Alarm In) and GND (Ground) connectors.. See Chapter 3 — Program and Operation for configuring alarm input.

GND (Ground)

NOTE: All the connectors marked GND are common.

Connect the ground side of the Alarm input and/or alarm output to the GND connector.

NC(NO)1 TO 4 (Normal Close or Normal Open : Alarm Out)

The dome camera can activate external devices such as buzzers or lights. Connect the device to the NC(NO) (Alarm Out) and COM (Common) connectors. See Chapter 3 — Program and Operation for configuring alarm output.

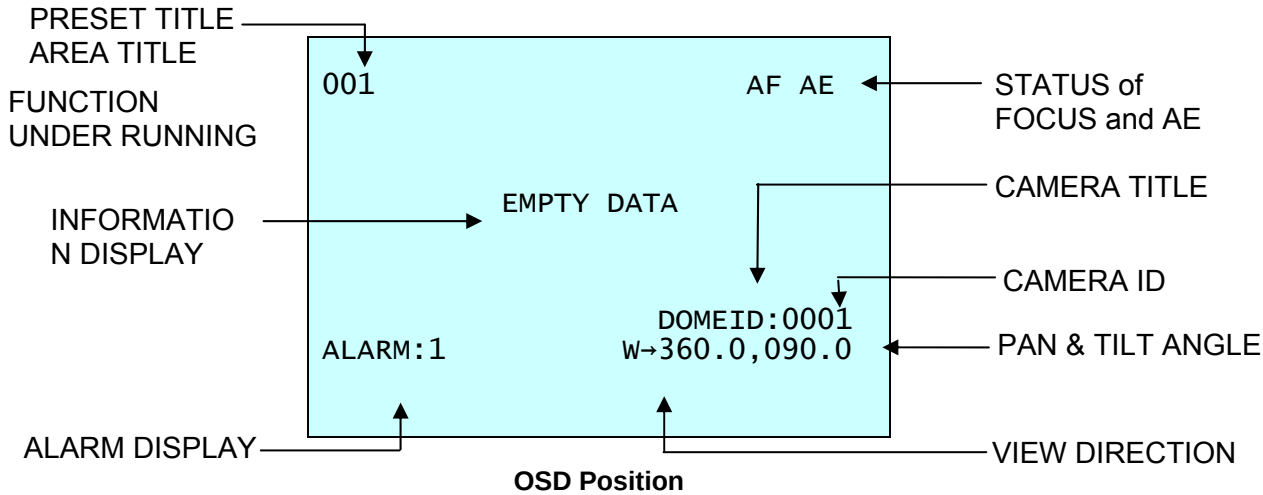
• Connecting the Power

Connect the power of AC 24V 850mA to the dome camera.

Use certified / Listed Class 2 power supply transformer only.

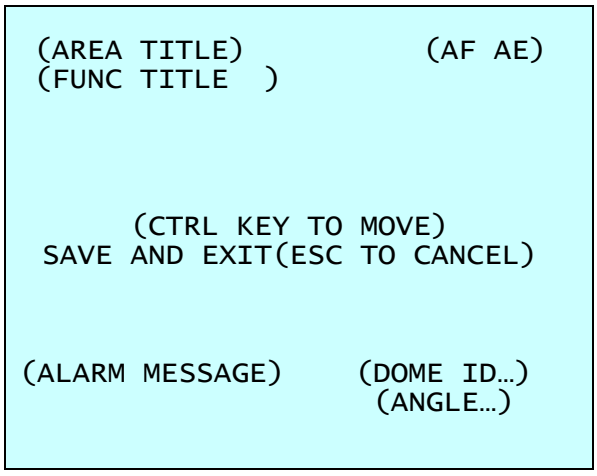
2.8 Getting Started

Once installed apply power to the dome camera. The dome camera will start a configuration sequence.



OSD Position

The dome can move the OSD position in the OSD position setup.



OSD Position Setup

Chapter 3 — Program and Operation

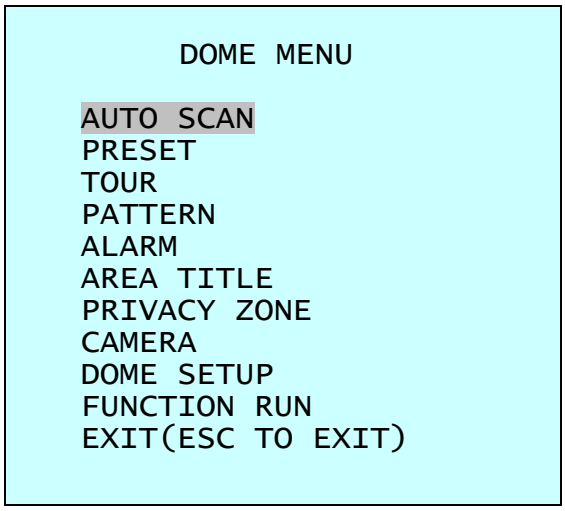
3.1 Dome Camera Selection

Before you program or operate a dome camera, you must select the dome camera by pressing the dome camera **No.** + **CAM**

Example: Pressing **1** , **0** and **CAM** key sequentially will select dome camera 10. The selected dome camera ID will be displayed on the LCD monitor of the keyboard controller.

3.2 Accessing the On-Screen Menu Utility

You can call up the On-screen menu utility on your monitor by pressing **MENU** key on the keyboard controller, the following On-screen menu utility will appear:



3.3 How to control the On-Screen Menu Utility

Function	Button
Call the On-screen menu utility	**MENU**
Navigate through the menu items.	**Joystick up or down**
Go into the sub-menu items.	**Joystick left or right or IRIS Open**
Change value. Enter the editing title mode.	**Joystick left or right or Zoom handle twist or Tele , Wide**
Change value of angle	**CTRL + Joystick**
Enter the changing angle mode.	**IRIS Open**
Exit the changing angle mode.	**IRIS Close**
Escape (EXIT)	**ESC**

3.4 Auto Scan (Shortcut: **SCAN**)

The Auto scan supports up to 17 programmed angles at user-programmable speeds. Follow these steps to program Auto Scan:

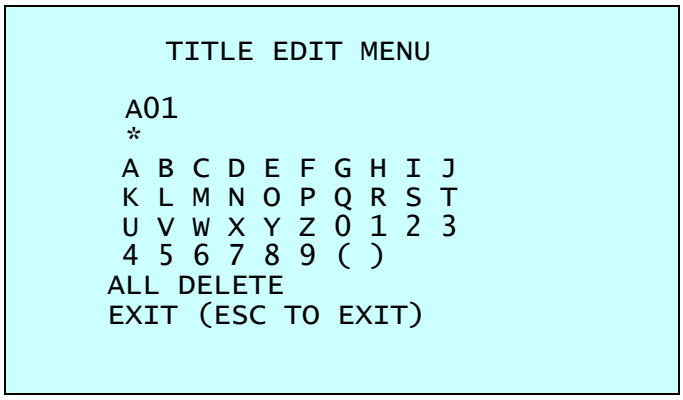
```
        AUTO SCAN SETUP

   NUMBER       : 01
   TITLE        : A01
   MODE         : NORMAL
   SPEED        :  5 STEP
   START ANGLE  : ----- ----- ---
   END ANGLE    : ----- ----- ---
   SCAN DIR     : CCW
   SWAP         : OFF
   DWELL        : 03 SEC
   SAVE AND EXIT(ESC TO CANCEL)
```

NUMBER :01 -08, 10-17, **09**:AUTO PAN mode
TITLE :up to 12 characters.
MODE :NORMAL, VECTOR, RANDOM (AUTO PAN mode :NORMAL, RANDOM only)
NORMAL: Move from start point to end point in panning only.
VECTOR: Move from start point to end point including tilt and zoom simultaneously and linearly. In some model, the zoom is fixed at wider angle and the zoom magnification information is not displayed.
RANDOM: Move randomly between the start point and the end point.

SPEED : 1 - 13 step, the lower number means the slower speed.

SCAN DIR : Set the scan direction, CCW(Counter Clock Wise), CW(Clock Wise)
SWAP : Swap the start point for the end point.
DWELL : Set the dwell time at the both end, 01 – 99 seconds

1. Press the **SCAN** key to enter the auto scan menu directly. Or press the **MENU** key to display the main menu on the monitor. Scroll to Auto Scan and push the **Joystick** to the right.
2. Select the" NUMBER" and set the desired number by pushing the **Joystick** left or right.
3. Select the "TITLE" and twist the **Joystick** to enter the title edit mode.
4. Twist the **Joystick** by changing the alphanumeric characters and move the next position. Or move down to the character table and press **CTRL** or **IRIS OPEN** at the desired character then the cursor position moves to the next position automatically. Push the **Joystick** left or right at the "ALL DELETE" field to delete all characters. Push the **Joystick** left or right at the "EXIT" field to finish title edit menu.



5. Select "MODE" and "SPEED".
6. Select "START ANGLE". Hold down the **CTRL** key while selecting the start position using the **Joystick**. Current panning position will be displayed. Release **CTRL** key to complete the selection of the start position. Or Press **IRIS Open** then the "CTRL" displays. Move the desired position and the zoom position. Press **IRIS Close** then the "CTRL" disappears. To adjust at the 0.1 degree interval, twist the **Joystick** at the pan field and the tilt field. To adjust at the one zoom interval, twist the **Joystick** at the zoom field.
7. Select "END ANGLE." Hold down the **CTRL** key while moving the Joystick to select the end position. The end position angle should be larger than start position. Release the **CTRL** key to complete the selection of the end position. Or Press **IRIS Open** then the "CTRL" displays. Move the desired position and the zoom position. Press **IRIS Close** then the "CTRL" disappears. To adjust at the 0.1 degree interval, twist the **Joystick** at the pan field and the tilt field. To adjust at the one zoom interval, twist the **Joystick** at the zoom field.
8. Set "SCAN DIR" to CCW or CW.
9. Select "SWAP". Set to ON, to exchange the start angle and the end angle.

10. Set “DWELL TIME”.

11. Select Save and Exit and push the **Joystick** to the right or press **IRIS Open**. Press **ESC** or **IRIS Close** to exit the program without saving.

Pressing the **HOME** key delete stored data at the angle field.

To set the position using the preset position:

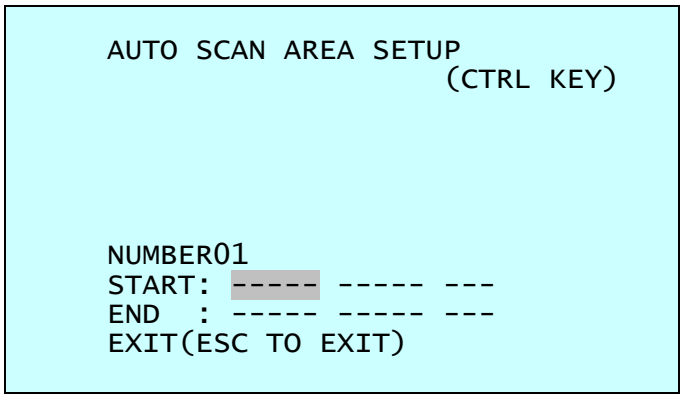
a. Before entering the Auto Scan menu, select a preset position as a starting point for Auto Scan.

Example: 2 + **PRST** and do step 1 to 4. In step 5, just press the **Ctrl** key at the start angle position, the current position will be displayed as a start position.

b. Save and exit from the menu.

c. In normal mode, call a preset to be the end point of scan. Press 3 + **PRST** then press **Scan** key to enter the Auto Scan menu. Move the cursor position to END ANGLE. Just press **CTRL** key at the end angle position. Save and exit from the menu.

Press **SCAN** key on the angle field to display with the small OSD. Then the screen will show as below.



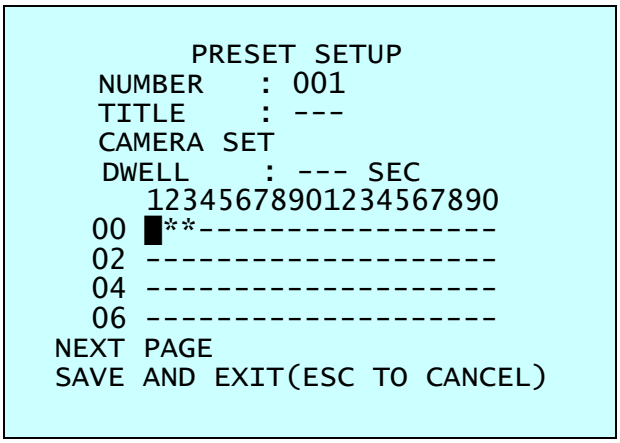
The setting procedure is the same as above.

NOTE: 09:AUTO-PAN mode(Endless panning)

3.5 Preset (Shortcut: **PRST**)

If you need to view specific places routinely, you should program presets. A preset is a programmed video scene with automatic pan, tilt, zoom, focus, and AE settings. Once programmed, placing the number position and pressing a **PRST** button on your controller calls up that preset automatically. In addition, presets may be assigned to alarm actions or as the “home” position for the dome camera. As many as 240 presets, whose positions are saved in the dome’s firmware, may be programmed.

There are three pages of preset menu. Each page has 80 presets. Pages can be scrolled by pushing the **Joystick** to the Left or Right on the first or last No. of Preset.



- : blank preset position
* : position has the preset
▉ : Current cursor position

Follow steps below to store the Preset positions:

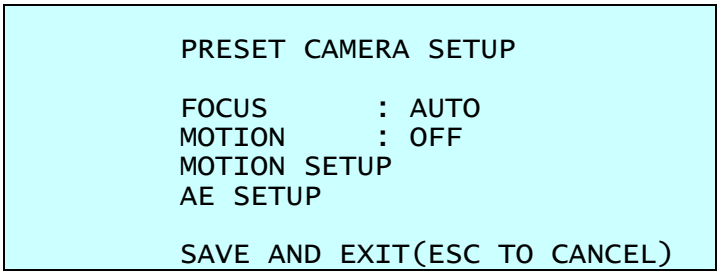
1. Press the **PRST** key to enter the preset menu directly. Or press the **MENU** key to display the main menu on the monitor. Scroll to preset and push the **Joystick** to the right.

2. Select the blank preset position to be stored by pushing the **Joystick** up, down, right, or left.

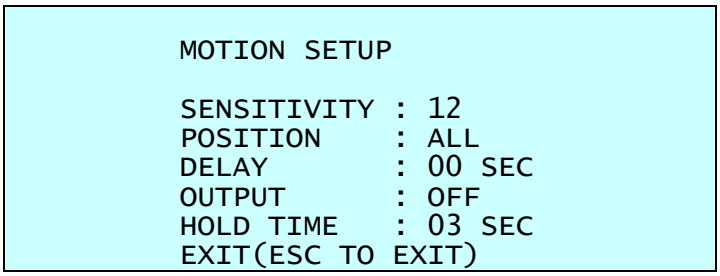
3. After selecting a blank position, press and hold **CTRL**, Use the **Joystick** to control the direction of the camera and lens.

4. After aiming the camera (view direction and lens control), release **CTRL**. The cursor will be on the Title then twist the **Joystick** handle or Press **Tele** or **Wide** Key to edit the preset title. Follow the procedure of the auto scan above to edit titles.

5. Select “CAMERA SET” and pushing the **Joystick** left or right. Then the preset camera setup displays.



Set FOCUS: AUTO, MANUAL, ONE PUSH
Set MOTION: OFF, ON
Select “MOTION SETUP” and pushing the Joystick left or right. Then the MOTION setup displays.



Set SENSITIVITY: 1~10(22X model) / 1~15(36X model)
Set POSITION: ALL, CENTER
Set DELAY: 0~5 SEC
Set OUTPUT: OFF, OUT1
Set HOLD TIME: 3~99 SEC

Select “AE SETUP” and pushing the **Joystick** left or right. Then the AE setup displays. Refer to the AE SETUP in the camera setup.

6. Set “DWELL TIME”(03-99second)

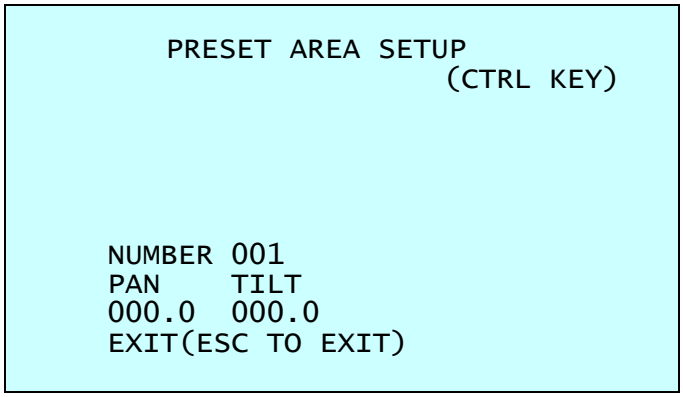
7. To select the next page of presets, scroll the page by pushing the **Joystick** to the Left on the first and last columns of the menu.

8. Repeat steps 2 through 7 for each additional preset position.

9. Select Save and Exit by pushing the Joystick to the right. Press ESC to exit the Preset menu without saving.

NOTE: Press the HOME key at programmed preset position(*) to delete a programmed preset view.

The position, which is marked with *, already has the preset view assigned. To review the stored preset, press **PRST** key on the * , The camera will show the stored preset scene.



Hold down the **CTRL** key while selecting the desired scene using the **Joystick**. Current position will be displayed. Release **CTRL** key to complete. Or Press **IRIS Open** then the “CTRL” displays. Move the desired position and the zoom position. Press **IRIS Close** then the “CTRL” disappears. Select Exit and push the **Joystick** to the right.

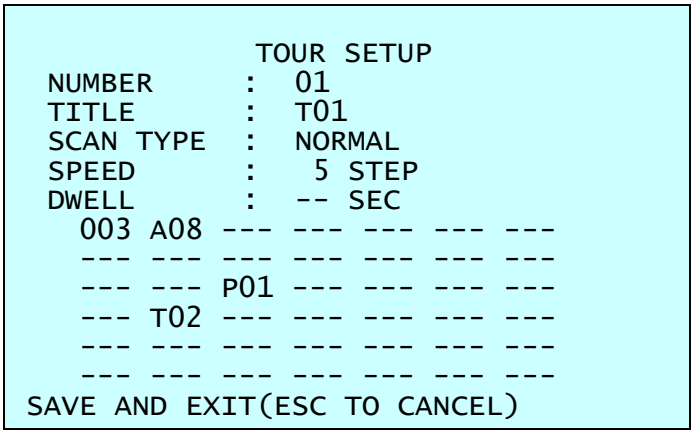
3.6 Shortcut of Preset Program

After selecting the desired scene, press No. (**1** to **240**), and press **CTRL** and **PRST** subsequently. The current view will be stored to the selected preset number if the preset number is empty. If selected preset number is not empty, "*OVER WRITE*" message will be displayed on the monitor and select the "OK" and push the **Joystick** to the right to overwrite.

Example: **1**, **0**, **1** + **CTRL** + **PRST** will store current view as preset No. **101**. In this case, focus will be programmed as Auto, dwell time will be set to 3 second, and the current AE mode will be programmed.

3.7 Tour (SHORTCUT: **TOUR**)

There are 8 programmable Tours. Each Tour consists of up to 42 Preset positions, Patterns, Scans or other Tours (second-level). Using second-level tours, it can be expanded to over 300 functions in a single tour.



---	: blank position
SCAN TYPE	: NORMAL/ VECTOR
DWELL	: 03-99 Sec
003	: Preset (1~240)
A08	: Auto Scan (1~8,10~17)
P01	: Pattern (1~8)
T02	: Tour (1~8)

Follow the steps below to program the Tours:

1. Press **MENU** to display the main menu on the monitor. Scroll to Tour and push the **Joystick** to the right to enter the Tour menu. Or just press the **TOUR** key on the keyboard.

2. Select the" NUMBER" and set the desired number by pushing the **Joystick** left or right.

3. Choose a blank position to be programmed by pushing the **Joystick** up, down, right, or left.

4. To add a stored preset, twist the **Joystick** then the stored preset number displays.

5. To place functions other than preset, press **TOUR**, **PTRN**, or **SCAN** for Tour, Pattern or Auto Scan respectively.

6. You can also overwrite the programmed number and to remove a stored number from the Tour, press the **HOME** key on the stored number, a blank position mark (---) will be displayed.

7. Repeat Step 2 through 5 for each desired position. Each title will be displayed on top of the line.

8. To edit the title, follow the procedure of the auto scan above to edit titles

9. Select Save and Exit and push the **Joystick** to the right. Press **ESC** to exit the program without saving.

You can expand the Tour sequence by calling other programmed tours.

NOTE: The speed applies in the vector mode only.
NOTE: In the Tour mode, in conjunction with preset and Auto Scan, you can make the camera travel from a preset position to another preset position at a specific speed.

Example: Preset 001>002>003>004>005>006, Auto Scan 01 starts at preset 002, ends at preset 003, Auto Scan 02 starts at preset 005, ends at preset 006; Tour 001, 002, A01, 004, A02.

1 ➔ 2 2~3 ➔ 4 ➔ 5~6, repeat
where ➔ : Quick move, ~ : Programmed speed

To change the dwell time of the preset in the tour:
Use the **Joystick** to move the cursor to a stored preset position. By pressing **PRST** key, the camera will move to the stored Preset view and the cursor moves to the dwell time field. After changing the dwell time, press **PRST** key and the cursor moves to the preset number.

To assign the functions other than preset in the tour when the function key is not existed:
Use the **Joystick** to move the cursor to a stored preset position. Pressing **CTRL** key or **IRIS OPEN** key will change the preset number to other function (auto scan, pattern, tour, preset) with the first programmed number. To change the number, twist the joystick or press **Tele** or **Wide** key.

3.8 Pattern (Shortcut: **PTRN**)

The Pattern feature records user control of the selected dome camera. Up to four 8 patterns can be stored and played back by pressing No.+ **PTRN** keys subsequently.

```
          PATTERN SETUP
                          (CTRL KEY)
NO      TITLE        SEC    PERCENT
01 :  P01            000     00.0%
02 :  P02            000     00.0%
03 :  P03            000     00.0%
04 :  P04            000     00.0%
05 :  P05            000     00.0%
06 :  P06            000     00.0%
07 :  P07            000     00.0%
08 :  P08            000     00.0%
TOTAL               0000     00.0%
SAVE AND EXIT(ESC TO CANCEL)
```

Follow steps below to program the Pattern:

1. Press **MENU** to display the main menu on the monitor. Scroll to Pattern and push the **Joystick** to the right to enter the pattern menu. Or just press the **PTRN** key on the keyboard.

2. Select the desired pattern to be programmed by pushing the **Joystick** Up or Down. If the pattern is not 000, a pattern has already been recorded. Patterns can be overwritten.

3. Press and hold down the **CTRL** key while controlling the camera direction and zoom with the **Joystick**. The dome will be automatically recorded until you release the **CTRL** key. Or Press **IRIS Open** then the "CTRL" displays. Move the position and the zoom position. Press **IRIS Close** then the "CTRL" disappears.

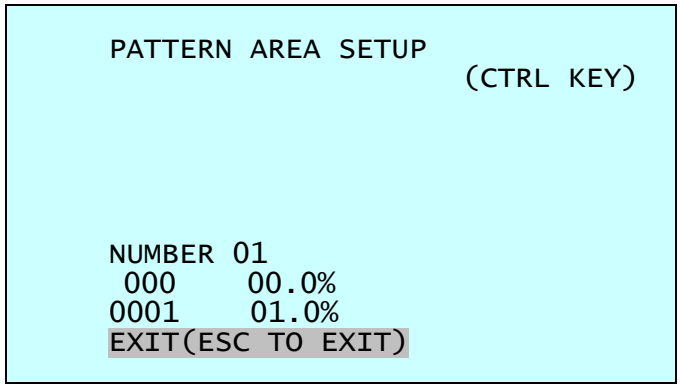
4. Select Save and Exit and push the **Joystick** to the right. Press **ESC** to exit the program without saving.

5. To edit the title, follow the procedure of the auto scan above to edit titles.

NOTE: Press the HOME key at any programmed position to delete the pattern.

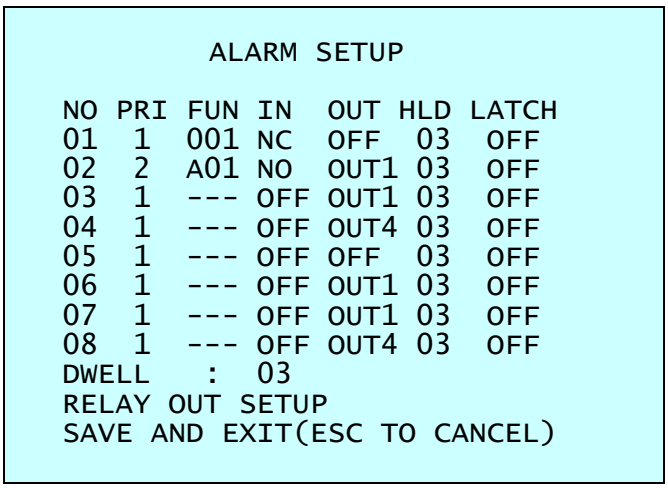
NOTE: If total recording time reaches 500 seconds, it will automatically stop for a moment.

Press **PTRN** key on the title field to display with the small OSD. Then the screen will show as below.



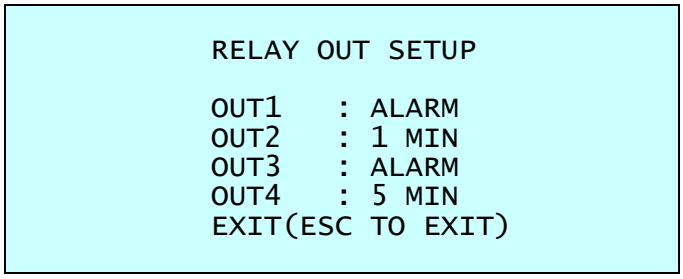
The setting procedure is the same as above.

3.9 Alarm



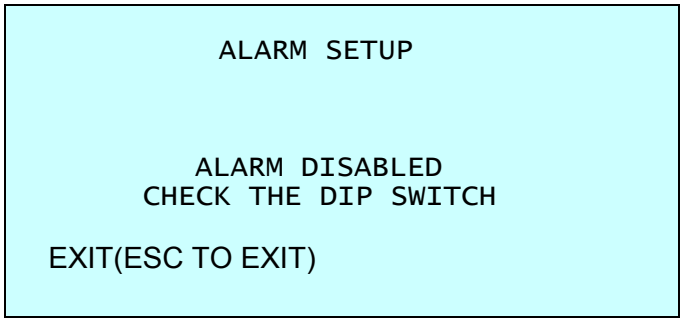
NO : Alarm input number
PRI(Priority) : The lower number has higher priority. (0-8)
FUN(function) : Stored function number to be called by alarm.
IN : NO/NC - normally open /Closed OFF - ignore
OUT : OUT1~OUT4 - Relay out 1,2,3,4, OFF - No output.
HLD(HOLD) : Alarm will be held for programmed time (03 to 99 seconds)
LATCH : ON - Shows all alarms including past alarm.
OFF - Shows activated alarms only.
DWELL :means the dwell time during multiple alarms, 03 to 99 seconds.

The RELAY OUT setup is helpful when the outdoor housing is used with the dome.
Ex.) When you connect the relay output of the dome to the heater connector of the outdoor housing, the relay output can operate during the setting time only.



ALARM: the relay output is operated during an alarm operation or by the short key of our keyboard.
1-5 MIN(minute): the relay output is operated during this setting time only by the function run of the dome menu or the short key of our keyboard.
NOTE: This **1-5 MIN** setting is not operated by an alarm.

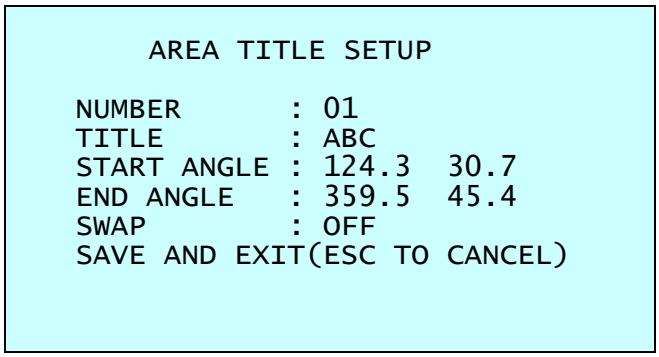
NOTE: If you disable Alarm by dip switch, Alarm menu will be displayed following screen.



There are 9 levels of priority. The function can be selected by Preset, Auto scan, Pattern or Tour and “0” is the highest priority. Lower priority alarms won’t be serviced until the higher priority alarm is completed. Equal priority alarms will be serviced repeatedly with the dwell time.

3.10 Area Title

Enter a specific name on programmed angle between START and END. For the screen below, when the camera points at an angle between 124.3° (PAN), 30.7° (TILT) to 359.5° (PAN), 45.4° (TILT), ABC will be displayed on the screen.



NUMBER :01 - 16
TITLE :up to 12 characters.
SWAP : Swap the start point for the end point.

1 . Select the" NUMBER" and set the desired number by pushing the **Joystick** left or right.

2. To edit the title, follow the procedure of the auto scan above to edit titles.

3. Select "START ANGLE". Hold down the **CTRL** key while selecting the start position using the **Joystick**. Current panning position will be displayed. Release **CTRL** key to complete the selection of the start position. Or Press **IRIS Open** then the "CTRL" displays. Move the desired position. Press **IRIS Close** then the "CTRL" disappears. To adjust at the 0.1 degree interval, twist the **Joystick** at the pan field and the tilt field.

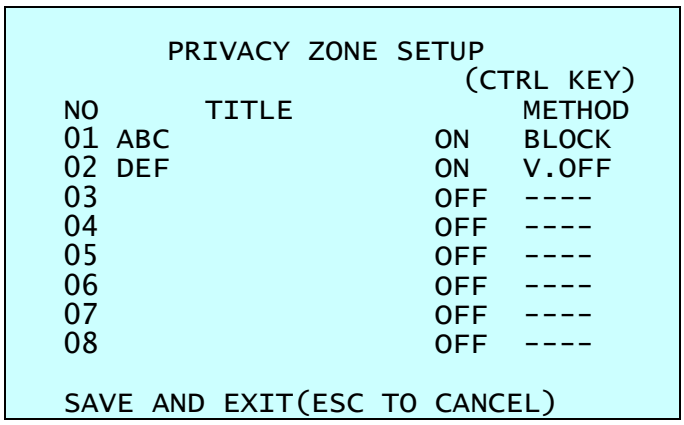
4. Select "END ANGLE." Hold down the **CTRL** key while moving the Joystick to select the end position. Release the **CTRL** key to complete the selection of the end position. Or Press **IRIS Open** then the "CTRL" displays. Move the desired position. Press **IRIS Close** then the "CTRL" disappears. To adjust at the 0.1 degree interval, twist the **Joystick** at the pan field and the tilt field.

5. Select "SWAP". Set to ON, to exchange the start angle and the end angle.

6. Select Save and Exit and push the **Joystick** to the right or press **IRIS Open**. Press **ESC** or **IRIS Close** to exit the program without saving.

3.11 Privacy Zone

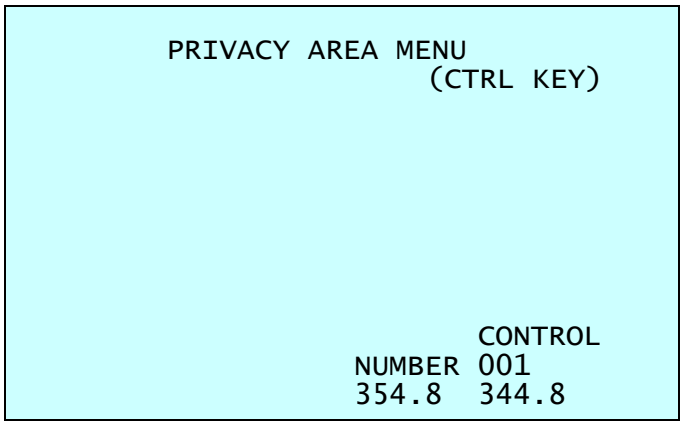
Hide up to 8 unwanted scenes in a camera.



1. Place the cursor at the title field.

2. Holding down the **CTRL** key displays the privacy area menu while selecting the position using the **Joystick**. Current position will be displayed. Release **CTRL** key to complete the selection of the position.

   Or Press **IRIS Open** then the privacy area menu displays. Move the desired position. Press **IRIS Close** then the “CTRL” disappears and returns to the previous menu.



3. Place the cursor at the title field. Twist the **Joystick** to enter the title edit mode. Follow the procedure of the auto scan above to edit titles.

4. To turn the stored zone On or Off, twist the **Joystick** handle or press **Tele** or **Wide** Key.

5. Set the method, “BLOCK” or “V.OFF(video off)”

6. Select the Save and Exit option by pushing the **Joystick** up or down. Save and exit the program by pushing the **Joystick** to the right. Press **ESC** to exit the program without saving.

Press the **HOME** key to delete programmed privacy zone at the title field.

3.12 Camera Menu Type 1

NOTE: The features will vary depending on the camera module installed in your dome camera.

```
          CAMERA SETUP

  FOCUS CONTROL
  WB CONTROL
  AE CONTROL
  LINE LOCK CONTROL
  CAMERA CONTROL
  EXIT(ESC TO EXIT)
```

• FOCUS CONTROL

```
          FOCUS SETUP

   MODE             : AUTO
   AF SENSITIVITY   : LOW
   FOCUS LIMIT      : 29CM
   SAVE AND EXIT(ESC TO CANCEL)
```

MODE AUTO / MANUAL / ONE PUSH / CONSTANT MANUAL
Use manual mode in normal use.

AF SENSITIVITY NORMAL / LOW
NORMAL: Use this option when shooting fast motion.
LOW: Offers better focus stability. In low luminance conditions, Auto Focus stops operation even when brightness changes, enabling stable images of moving objects.

FOCUS LIMIT This distance is approximate value and the focus operate from the setting value.

CAUTION: Avoid continuous, 24-hour use of the auto focus. This will shorten the lifespan of the lens.

• WB (White Balance) CONTROL

```
           WB SETUP

    MODE       :  ATW
    R GAIN     :  213
    B GAIN     :  174
  SAVE AND EXIT(ESC TO CANCEL)
```

MODE AUTO / INDOOR / OUTDOOR / ONE PUSH / ATW / MANUAL / OUTDOOR AUTO / SODIUM AUTO / SODIUM

AUTO	Computes the white balance value output using color information from the entire screen automatically. (3000 to 7500 °K)
INDOOR	3200 K base mode
OUTDOOR	5800 K base mode
ONE PUSH	One push WB mode is a fixed mode that may be automatically readjusted at the stop after moving.
ATW	Auto tracing white balance. (2000 to 10000° K)
MANUAL	Control of R and B gain
OUTDOOR AUTO	Auto mode specifically for outdoors.
SODIUM AUTO	Auto mode that is compatible with sodium vapor lamps
SODIUM	Fixed mode specifically for sodium vapor lamps

RGAIN 0 ~ 255
BGAIN 0 ~ 255
RGAIN / BGAIN modes are controllable only in MANUAL Mode

• AE CONTROL

```
            AE SETUP

  MODE          : MANUAL
  SLOW SHUTTER  : ---
  IRIS          : F5.6
  GAIN          : 0 DB
  BRIGHT        : AUTO
  SHUTTER       : 1/60
  BACK LIGHT    : OFF
  NIGHT SHOT    : AUTO
  WDR           : OFF
  SLOW RESPONSE: 1
  SAVE AND EXIT(ESC TO CANCEL)
```

MODE AUTO / MANUAL / SHUTTER PRIO / IRIS PRIO / BRIGHT

AUTO	Auto Iris and Gain, Fixed Shutter speed (NTSC: 1/60 sec, PAL: 1/50 sec)
MANUAL	Variable Shutter, Iris and Gain.
SHUTTER PRIO	Variable Shutter speed, Auto Iris and Gain.
IRIS PRIO	Variable Iris, Auto Gain and Shutter speed.
BRIGHT	Variable Iris and Gain

SLOW SHUTTER ON/OFF
IRIS CLOSE / F28 / F22 / F19 / F16 / F14 / F11 / F9.6 / F8.0 / F6.8 / F5.6 / F4.8 / F4.0 / F3.4 / F2.8 / F2.4 / F2.0 / F1.6
GAIN 0 / 2 / 4 / 6 …… / 28 / -3 DB
BRIGHT 0, 1,2, 3, 4 ..... 29, 30,31
SHUTTER 1/1 , 1/2 , 1/4(3), 1/8(6). .. 1/4000(3500), 1/6000, 1/10000
BACK LIGHT Objects in front of bright backgrounds will be clearer with BLC ON.
NIGHT SHOT AUTO,ON,OFF,GLOBAL
WDR ON,OFF
SLOW RESPONSE 1-32

NOTE: Values in ( ) are for PAL Camera.
NOTE: The Back Light operates in AUTO mode only.
For example, if you change the back light to ON, the camera will change AE mode to "AUTO".

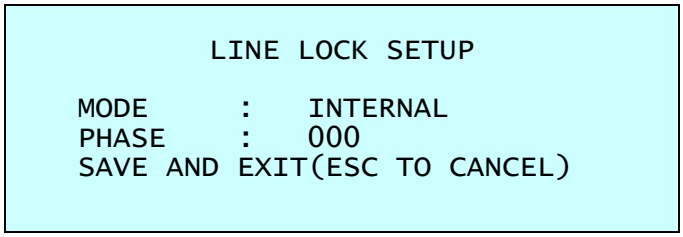
The NIGHT SHOT option removes the IR cutoff filter of the camera and makes the camera sensitive to near infrared.

AUTO Camera goes in to B&W mode at low light.
GLOBAL Controlled by the keyboard.
The operator can enable NIGHT SHOT for all dome cameras at the same time.
If the NIGHT SHOT mode is set to GLOBAL, "999" + **ENTR** will turn Off the NIGHT SHOT mode and "888" + **ENTR** will turn On the NIGHT SHOT mode.
ON: B/W mode.
OFF: Color mode.
NOTE : Selecting the Night Shot to Auto mode will change AE mode to "AUTO".

SLOW RESPONSE

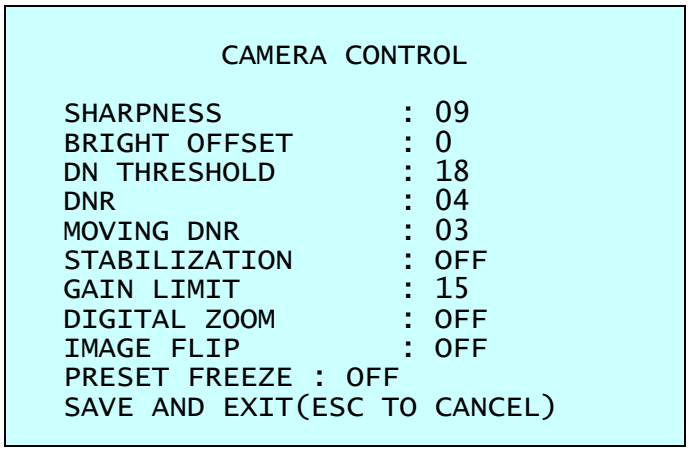
The slow response function allows you to lengthen the automatic exposure response speed from 1 up to 32 times. For example, with the normal setting (about 1 second), if the headlights of a car are caught by the camera, the camera automatically adjusts the exposure so that it can shoot a high-intensity subject (in this case, the headlights). As a result, images around the headlights, that is, the rest of the subject, except the headlights, becomes relatively dark, and poorly distinguished. However, using the slow response function can still easily distinguish the portions of the image surrounding the headlights.

• LINE LOCK CONTROL



MODE	INTERNAL / EXTERNAL
PHASE	Adjusts phase of picture with other cameras in EXTERNAL mode.(0~255).

• CAMERA CONTROL



SHARPNESS	The higher the value, the more edges in the picture will be enhanced (0~15)
BRIGHT OFFSET	(-7,…,0(default),…7) : Adjust the brightness level (AUTO, SHUTTER PRIO, IRIS PRIO mode only) .
DN THRESHOLD	5, … 18 (default),…, 28 Adjusts the level of light at which the camera automatically switches out of night mode (B/W) operation.
DNR	0~5, DNR filter effect level when pan/tilt stop
MOVING DNR	0~5, DNR filter effect level when pan/tilt move
STABILIZATION	ON/OFF, Image stabilizer
GAIN LIMIT	4~15, Gain limit in the AE mode
Digital ZOOM	OFF : Zoom range is limited to the optical. 2X : Zoom is extendable up to 2X of digital range. 4X : Zoom is extendable up to 4X of digital range. MAX: Zoom is extendable Max digital zoom range
IMAGE FLIP	This function turns the video output from the camera upside down and reverses it horizontally. **This option is helpful to install in the opposite side.**
PRESET FREEZE	ON: the image is frozen during calling preset.

3.13 Camera Menu Type 2

NOTE: The menu features will vary depending on the camera module installed in your dome camera.

```
          CAMERA SETUP

  FOCUS CONTROL
  WB CONTROL
  AE CONTROL
  DNR CONTROL
  LINE LOCK CONTROL
  SHARPNESS          : 05
  RESOLUTION         : MID
  DIGITAL ZOOM       : OFF
  IMAGE FLIP         : OFF
  PRESET FREEZE      : OFF
  SAVE AND EXIT(ESC TO CANCEL)
```

SHARPNESS The higher the value, the more edges in the picture will be enhanced (0~15)

RESOLUTION Select high resolution mode. (LOW / MID / HIGH)

DIGITAL ZOOM OFF: Zoom range is limited to the optical.
2X: Zoom is extendable up to 2X of digital range.
4X: Zoom is extendable up to 4X of digital range.
8X: Zoom is extendable up to 8X of digital range.
MAX: Zoom is extendable Max digital zoom range.

IMAGE FLIP This function turns the video output from the camera upside down and reverses it horizontally.
This option is helpful to install in the opposite side.

PRESET FREEZE ON: the image is frozen during calling preset.

• FOCUS CONTROL

```
            FOCUS SETUP

  MODE              : AUTO
  FOCUS LIMIT       : 1.0M
  SAVE AND EXIT(ESC TO CANCEL)
```

MODE AUTO / MANUAL / ONE PUSH / CONSTANT MANUAL
Use manual mode in normal use.

FOCUS LIMIT This distance is approximate value and the focus operate from the setting value.

CAUTION: Avoid continuous, 24-hour use of the auto focus. This will shorten the lifespan of the lens.

• WB (White Balance) CONTROL

```
            WB SETUP

    MODE        :  AWB
    R GAIN      :  ---
    B GAIN      :  ---
    SAVE AND EXIT(ESC TO CANCEL)
```

MODE AWB / WAWB / INDOOR / OUTDOOR / MANUAL

AWB	Computes the white balance value output using color information from the entire screen automatically. (2500 to 9500 °K)
WAWB	Wide range auto white balance mode.(1800 to 10500 °K)
INDOOR	Indoor white balance mode.
OUTDOOR	Outdoor white balance mode.
MANUAL	Manual mode. You can change R and B Gain manually.
RGAIN	0~255
BGAIN	0~255

RGAIN / BGAIN modes are controllable only in MANUAL Mode

• AE CONTROL

```
            AE SETUP

  MODE              : MANUAL
  SLOW SHUTTER      : ---
  GAIN              : MIN
  BRIGHT            : 003
  SHUTTER           : 1/60
  FLICKERLESS       : ---
  BACK LIGHT        : OFF
  WDR               : ---
  WDR LEVEL         : ---
  NIGHT SHOT        : AUTO
  SAVE AND EXIT(ESC TO CANCEL)
```

MODE AUTO1 / AUTO2 / SHUTTER PRIO / MANUAL

AUTO1	Auto exposure mode1.(Use to normal surroundings : indoor)
AUTO2	Auto exposure mode2 (Use to high brightness surroundings : outdoor)
SHUTTER PRIO	Variable Shutter speed, Gain.
MANUAL	Variable Shutter speed, Gain.

SLOW SHUTTER	ON / OFF
GAIN	MIN / LOW / MID / HIGH
BRIGHT	0, 1, 2, 3, 4 ..... 68, 69, 70
SHUTTER	1/60(50), 1/100(120), …, 1/2000, 1/10000, 1/100000
BACK LIGHT	Objects in front of bright backgrounds will be clearer with BLC ON.

WDR ON / OFF

WDR LEVEL 10~50
NIGHT SHOT AUTO / ON / OFF / GLOBAL

NOTE: Values in ( ) are for PAL Camera.
NOTE: The WDR operates in AUTO1 mode only.

The NIGHT SHOT option removes the IR cutoff filter of the camera and makes the camera sensitive to near infrared.

AUTO Camera goes in to B&W mode at low light.
GLOBAL Controlled by the keyboard.
The operator can enable NIGHT SHOT for all dome cameras at the same time. If the NIGHT SHOT mode is set to GLOBAL, "999" + **ENTR** will turn Off the NIGHT SHOT mode and "888" + **ENTR** will turn On the NIGHT SHOT mode.
ON B/W mode.
OFF Color mode.

• DNR CONTROL

```
        DNR CONTROL SETUP

   2DNR(1)         : 001
   3DNR(1)         : 010
   2DNR(2)         : 005
   3DNR(2)         : 002

   SAVE AND EXIT(ESC TO CANCEL)
```

2DNR(1), 2DNR(2) Select 2D noise reduction level (OFF / 001~007)
3DNR(1), 3DNR(2) Select 3D noise reduction level (OFF / 001~031)

NOTE: DNR(1) applied when motor stopped. DNR(2) applied when motor moving.

• LINE LOCK CONTROL

```
          LINE LOCK SETUP

   MODE     :   INTERNAL
   PHASE    :   000
   SAVE AND EXIT(ESC TO CANCEL)
```

MODE INTERNAL / EXTERNAL
PHASE Adjusts phase of picture with other cameras in EXTERNAL mode. (0~259 NTSC, 0~319 PAL).

3.14 Camera Menu Type 3

```
          CAMERA SETUP

  FOCUS CONTROL
  WB CONTROL
  AE CONTROL
  LINE LOCK CONTROL
  SHARPNESS          : AUTO
  DIGITAL ZOOM       : OFF
  IMAGE FLIP         : OFF
  PRESET FREEZE      : OFF
  AGC LIMIT          : 25
  IMAGE STABLIZATION: OFF
  SAVE AND EXIT(ESC TO CANCEL)
```

SHARPNESS The higher the value, the more edges in the picture will be enhanced (AUTO/0~31)

Digital ZOOM OFF : Zoom range is limited to the optical.
2x : Zoom is extendable up to 2x of digital range.
4x : Zoom is extendable up to 4x of digital range.
MAX: Zoom is extendable Max digital zoom range.

IMAGE FLIP This function turns the video output from the camera upside down and reverses it horizontally.
This option is helpful to install in the opposite side.

PRESET FREEZE ON: the image is frozen during calling preset.

AGC LIMIT Set the maximum AGC gain tuning value (00-40, default : 25).

IMAGE STABILIZATION ON: To increase the stability of an image from frame-to-frame jitter with shaking.

Note: When the image stabilization function is operating, DSS will be disabled and WDR will be turned OFF.

• FOCUS CONTROL

```
          FOCUS SETUP

  MODE               : AUTO
  FOCUS LIMIT        : 30CM
  SAVE AND EXIT(ESC TO CANCEL)
```

MODE AUTO / MANUAL / ONE PUSH / CONSTANT MANUAL
Use manual mode in normal use.

FOCUS LIMIT Set the minimum focus length under 10x zoom ratio.
(1CM / 10CM / 30CM / 1M / 1.5M: This distance is approximate value.)

CAUTION: Avoid continuous, 24-hour use of the auto focus. This will shorten the lifespan of the lens.

• WB (White Balance) CONTROL

```
          WB SETUP

    MODE        :  AUTO
    R GAIN      :  120
    B GAIN      :  100
    SAVE AND EXIT(ESC TO CANCEL)
```

MODE AUTO / MANUAL

MANUAL Control of R and B gain
AUTO Computes the white balance value output using color information from the entire screen automatically. (2800 to 8000 °K)

RGAIN 0 ~ 255
BGAIN 0 ~ 255
RGAIN / BGAIN modes are controllable only in MANUAL Mode

• AE CONTROL

```
          AE SETUP

  MODE          : AE (DAWN)
  DSS LIMIT     : 1/2
  IRIS          : AUTO
  GAIN          : AUTO
  SHUTTER       : 1/60
  IRIS OFFSET   : 106
  IRIS PEAK     : 016
  BLC           : OFF
  BLC LEVEL     : 030
  NIGHT SHOT    : OFF
  WDR           : OFF
  SAVE AND EXIT(ESC TO CANCEL)
```

MODE AE / AE(DSS) / AE(DAWN) / AE(DARK) / IRIS PRIO / SHUTTER PRIO / AGC PRIO

AE Automatic Exposure. (available motion detection) Refer to the motion setup type 2.
AE (DSS) Automatic Exposure with the DSS
AE(DAWN) Under the low light condition when night shot mode is AUTO, IR Cut filter is automatically turned on and off.
AE (DARK) IR Cut filter is automatically turned on and off more dark condition than AE (DAWN)

DSS LIMIT Digital Slow Shutter Limit 1/2(1.5), 1/4(3), 1/8(6), 1/15(12), 1/30(25), OFF
IRIS F1.4 / F2 / F2.8 / F4 / F5.6 / F8 / F11 / F16 / F22 / F32
GAIN 0 / 6 / 12 / 18 / 24 / 30 DB
SHUTTER 1/2(1.5), 1/4(3), 1/8(6). .. 1/4000, 1/10000, 1/30000

IRIS OFFSET Set the overall brightness of a picture. (000-255, default :106) Increase the value to brighten the scene. Decrease the level to

darken the scene. This is helpful when the scene is too bright or too dark.

IRIS PEAK Set the effect of focusing peak, or how video peaks affect the overall picture brightness. (000-127, default :016)
When the scene have bright lights such as spotlight or headlight, if you set Iris peak level high, the image get dark because of the effect of focusing peaks. Overall picture darkens.
If you set Iris peak level low, the image has no effect of focusing peak and the image of spot lights get white. Overall picture remains but spot light become very bright.
When you set Iris offset level low in an image with spotlights, a soft image may occurs because of the image of on and around the spotlights get saturated.

BACK LIGHT Objects in front of bright backgrounds will be clearer with BLC ON.
Note: When ON, WDR will be disabled.
BACK LIGHT LEVEL 0 ~ 255
NIGHT SHOT AUTO,ON,OFF,GLOBAL
WDR ON, WDR1, WDR2

NOTE: Values in ( ) are for PAL Camera.

The NIGHT SHOT option removes the IR cutoff filter of the camera and makes the camera sensitive to near infrared.

AUTO Camera goes in to B&W mode at low light.
GLOBAL Controlled by the keyboard.
The operator can enable NIGHT SHOT for all dome cameras at the same time.
If the NIGHT SHOT mode is set to GLOBAL, “999” + **ENTR** will turn Off the NIGHT SHOT mode and “888” + **ENTR** will turn On the NIGHT SHOT mode.

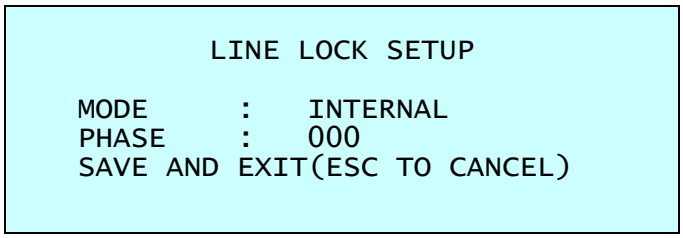
ON : B/W mode.
OFF: Color mode.

NOTE : The Night Shot function is controllable only AE, AE(DSS), and Priority (Shutter/Iris/AGC) mode.

AE mode	DSS	IR Remove	WDR
AE	X	O [Manual]	O
AE (DSS)	O [auto]	O [Manual]	O
AE(DAWN)	O [auto]	O [auto] : ***Hi sensitivity***	O
AE (DARK)	O [auto]	O [auto] : ***Mid sensitivity***	O
Shutter priority	O [Manual]	O [Manual]	X
IRIS priority	X	O [Manual]	X
AGC priority	X	O [Manual]	X

X : not available, O: available

• LINE LOCK CONTROL



MODE	INTERNAL / EXTERNAL
PHASE	Adjusts phase of picture with other cameras in EXTERNAL mode.(0~255)

3.15 Camera Menu Type 4

```
          CAMERA SETUP
  FOCUS CONTROL
  WB CONTROL
  AE CONTROL
  LINE LOCK CONTROL
  SHARPNESS          : 34
  DIGITAL ZOOM       : OFF
  IMAGE FLIP         : OFF
  PRESET FREEZE      : OFF
  STABILIZATION      : OFF
  DNR                : MIDDLE
  MOVING DNR         : LOW
  SAVE AND EXIT(ESC TO CANCEL)
```

SHARPNESS 0~64, The higher the value, the more edges in the picture will be enhanced

DIGITAL ZOOM OFF: Zoom range is limited to the optical.
2X: Zoom is extendable 2X digital zoom range.
4X: Zoom is extendable 4X digital zoom range.
8X: Zoom is extendable 8X digital zoom range.
MAX: Zoom is extendable 16X digital zoom range.

IMAGE FLIP OFF/ON, This function turns the video output from the camera upside down and reverses it horizontally.
This option is helpful to install in the opposite side.

PRESET FREEZE OFF/ON, This function turns the video output from the camera upside down and reverses it horizontally.

STABILIZATION OFF/ON,, Image stabilizer

DNR OFF/LOW/MIDDLE/HIGH,, DNR when PTZ stop

MOVING DNR OFF/LOW/MIDDLE/HIGH,, DNR when PTZ move

• FOCUS CONTROL

```
            FOCUS SETUP

  MODE              : AUTO
  FOCUS LIMIT       : 50CM
  SAVE AND EXIT(ESC TO CANCEL)
```

MODE AUTO / MANUAL / ONE PUSH / CONSTANT MANUAL
Use manual mode in normal use.

FOCUS LIMIT This distance is approximate value and the focus operate from the setting value.

CAUTION: Avoid continuous, 24-hour use of the auto focus. This will shorten the lifespan of the lens.

• WB (White Balance) CONTROL

```
          WB SETUP

    MODE        :  AUTO
    R GAIN      :  ---
    B GAIN      :  ---
    SAVE AND EXIT(ESC TO CANCEL)
```

MODE AUTO / INDOOR / OUTDOOR / AWB / MANUAL

AUTO	Wide range auto white balance mode.(1700 to 11000 °K)
INDOOR	Indoor white balance mode.
OUTDOOR	Outdoor white balance mode.
AWB	Computes the white balance value output using color information from the entire screen automatically. (2900 to 6500 °K)
MANUAL	Manual mode. You can change R and B Gain manually.

RGAIN 0~200
BGAIN 0~200

RGAIN / BGAIN modes are controllable only in MANUAL Mode

• AE CONTROL

```
          AE SETUP

  MODE              : AUTO
  SLOW SHUTTER      : OFF
  IRIS              : AUTO
  GAIN LIMIT        : 07
  BRIGHT            : 050
  SHUTTER           : AUTO
  WDR/BLC           : OFF
  WDR/BLC LEVEL     : ---
  NIGHT SHOT        : AUTO
  SAVE AND EXIT(ESC TO CANCEL)
```

MODE AUTO / MANUAL / IRIS PRIO / SHUTTER PRIO

AUTO	Auto exposure mode
MANUAL	Variable Iris, Shutter speed
IRIS PRIO	Variable Shutter speed, Auto Iris.
SHUTTER PRIO	Variable Iris, Auto Shutter speed.

IRIS	0(CLOSE) ~ 255(F1.5)
SLOW SHUTTER	Slow shutter(SENS-UP) limit in AE(Auto and Iris Prio) mode, OFF(No slow shutter), ON(MAX X128, Auto slow shutter in AE mode)
GAIN LIMIT	1 ~ 10
BRIGHT	0 ~ 100
SHUTTER	X512, X256, X128, …, 1/30000, 1/50000, 1/120000 ’A.FLK’ means ‘1/100’ when NTSC and ‘1/120’ when PAL.
WDR/BLC	OFF / WDR / WDR’ACE / BLC / HSBLC

OFF	Backlight function off

WDR Wide Dynamic Range function on
WDR.ACE Wide Dynamic Range function wite ACE function
ACE can clearly distinguish objects

Note: WDR and WDR.ACE are available when mode is AUTO or IRIS PRIO mode, and when shutter is fixed to A.FLK..

BLC Backlight compensation function on
HSBLC Highlight Suppress BLC function on.

WDR/BLC LEVEL LOW / MIDDLE / HIGH
NIGHT SHOT AUTO / ON / OFF / GLOBAL

The NIGHT SHOT option removes the IR cutoff filter of the camera and makes the camera sensitive to near infrared.

AUTO Camera goes in to B&W mode at low light.
GLOBAL Controlled by the keyboard.
The operator can enable NIGHT SHOT for all dome cameras at the same time. If the NIGHT SHOT mode is set to GLOBAL, “999” + ENTR will turn Off the NIGHT SHOT mode and “888” + ENTR will turn On the NIGHT SHOT mode.
ON B/W mode.
OFF Color mode.

Note: NIGHT SHOT ‘AUTO’ is available in ‘AUTO’ or ‘IRIS PRIO’ AE mode.

• LINE LOCK CONTROL

```
          LINE LOCK SETUP

   MODE     :   INTERNAL
   PHASE    :   000
   SAVE AND EXIT(ESC TO CANCEL)
```

MODE INTERNAL / EXTERNAL
PHASE Adjusts phase of picture with other cameras in EXTERNAL mode. (0~255).

Note: Dome camera can be rebooted automatically after saving line lock mode, and dome detects line lock sync while booting.

3.16 Dome Setup

```
CONFIGURATION MENU

LANGUAGE          : ENGLISH
HOME FUNCTION SETUP
OSD DISPLAY
VIEW ANGLE SETUP
INITIALIZE DATA
ORIGIN OFFSET
DOME RESET
SYSTEM MENU
SYSTEM INFORMATION
SAVE AND EXIT(ESC TO CANCEL)
```

• LANGUAGE SETUP

LANGUAGE : Select the language you want.

• HOME FUNCTION SETUP

```
HOME FUNCTION SETUP

HOME FUNCTION   : NONE
FUNCTION NUMBER : ---
WAITING TIME     : 120 SEC
FUNCTION ENABLE : OFF
SAVE AND EXIT(ESC TO CANCEL)
```

HOME FUNCTION : None/ Tour/ Pattern / Auto Scan / Preset
FUNCTION NUMBER : - - -
WAITING TIME : 10~240 Seconds
FUNCTION ENABLE : ON/ OFF

The Home function can be set so that the camera automatically goes to Preset, Tour, Pattern, Auto Scan after the keyboard controller has been idle for a amount of time. For example, if the controller is idle for 120 seconds, the camera goes to preset 1.

Follow these steps to program the Home position:

1. Select Home Function by pushing the **Joystick** to the right or to the left to scroll through the None, Tour, Pattern, Auto Scan or Preset functions.
2. Select Function Number and push the **Joystick** to the right or to the left. The recorded function number will scroll.
3. Select Waiting Time and push the **Joystick** to the right or to the left to select from 10 to 240 seconds.
4. Select Function Enable and turn to ON or OFF by pushing the **Joystick** to the right or to the left.

• OSD DISPLAY

```
        OSD DISPLAY SETUP

CAMERA TITLE          : DOMEID
VIEW DIRECTION        : OFF
DOME OSD              : ON
AREA TITLE            : OFF
PRESET TITLE          : CONSTANT
FOCUS EXPOSURE        : ON
OSD POSITION SETUP

SAVE AND EXIT(ESC TO CANCEL)
```

CAMERA TITLE : up to 6 characters.

VIEW DIRECTION : ON / OFF
"ON" sets current direction as N(north) and the coordinate angle to 000. "OFF" hides the directional title. Every 90 degrees of clockwise rotation will change the title to E(East), S(South), W(West). If using the ON/OFF option frequently, it is recommended that you set "North" as a Preset. Recall the "North" Preset before enabling the directional title.

DOME OSD : ON / OFF
All display or title will disappear when DOME OSD DISPLAY sets OFF

AREA TITLE : ON / OFF
If this option is enabled, the area title displays when the camera moves.
Note: The DOME OSD DISPLAY must be enabled.

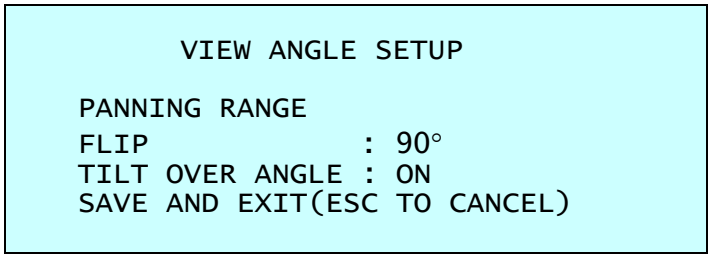
PRESET TITLE : CONSTANT / OFF / 3, 30, 60,120,180 second
Set the preset title display time.

FOCUSE EXPOSURE : ON / OFF
ON: FOCUS and EXPOSURE displays. (AF AE)

OSD POSITION SETUP
Select the OSD option with **Joystick** up and down, press **CTRL** and adjust the position by **Joystick** .

```
(AREA TITLE)                (AF AE)
(FUNC TITLE)




        (CTRL KEY TO MOVE)

    SAVE AND EXIT(ESC TO CANCEL)



  (ALARM MESSAGE)    DOMEID…XXXX
                     XXX.X  XXX.X
```

• VIEW ANGLE SETUP



FLIP: OFF,90°,100°,110°,120°,AUTO(18X,26X,36X MODEL) : ON,OFF(22X MODEL)

OFF: the dome camera moves until 90° vertically.

90°, 100°, 110°, 120°: allows the image to flip digitally when the camera moves over the setting angle vertically.

AUTO: When the camera reaches the floor directly above the moving object, it will stop. At that time, release the **Joystick** handle instantly and pull it down again to run the auto-flip function. When you use the panning range, we recommend using the flip mode to AUTO.

TILT OVER ANGLE:

This option is used to set the limit of the horizontal view angle so that the trim ring or ceiling does not obstruct the horizontal image when zooming out (wide angle).

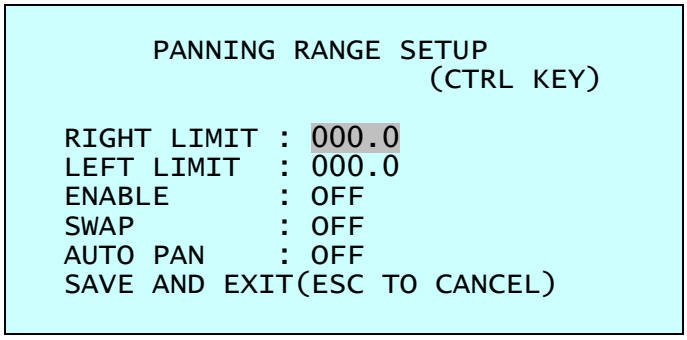
ON: In some installations it is desirable for the dome camera to be able to see above the horizon. When this option is chosen, the dome will tilt up over the horizon (About -10 degrees). When the lens is zoomed out, you can see the ceiling line. But when the lens is zoomed in, the viewing angle is narrower, and the ceiling line disappears.

Without Bubble: The tilt range of the camera is limited to see the horizon so the picture shows part of the ceiling line.

With Bubble: The tilt range of the camera is limited to see below the horizon (10 degrees).
Over Angle is not sufficient enough to avoid ceiling obstructions, please adjust Origin Offset of tilt angle as described below.

PANNING RANGE

When the dome camera is installed near a wall, panning range can be limited by user.

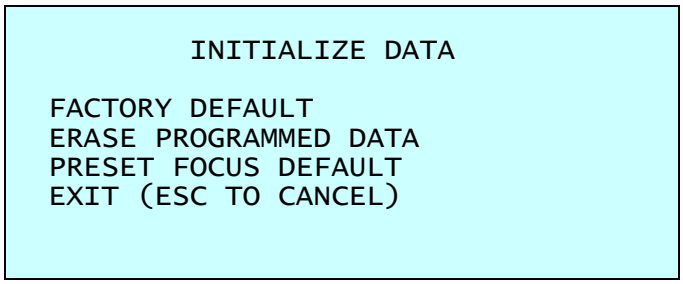


1. Place the dome camera under 90 degree vertically.
2. Set the right limit by pushing the **Joystick** to the right.
3. Set the left limit by pushing the **Joystick** to the left.
4. Set ENABLE to ON to use

To exchange the right and the left limit, set SWAP to ON.
To apply limits on the auto pan (endless panning), set AUTO PAN to ON.

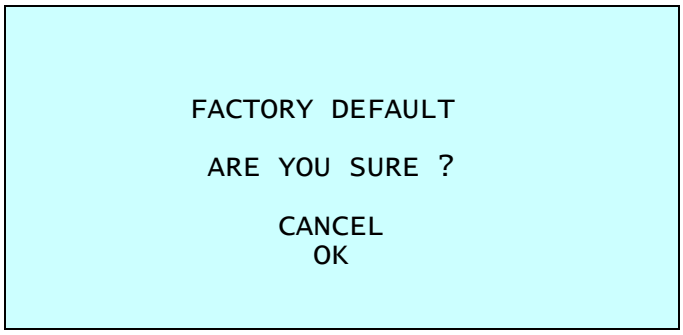
NOTE: When you use the panning range, we recommend using the flip mode to AUTO. When the flip mode is 90°, 100°, 110° or 120° and you moves over 90° vertically, the panning range operates in opposite side.

• INITIALIZE DATA



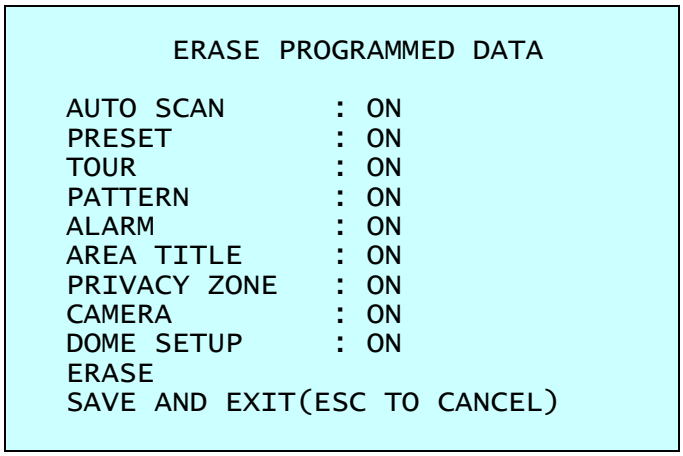
FACTORY DEFAULT

Select the Factory Default to initialize the Data.



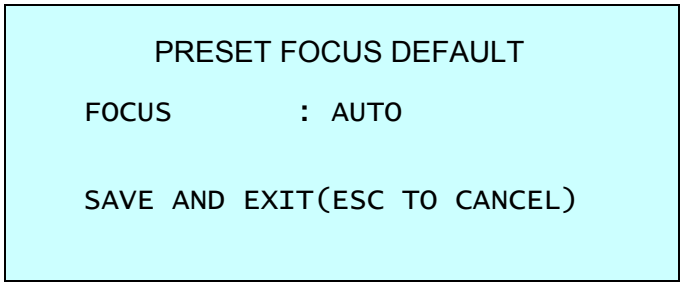
ERASE PROGRAMMED DATA

Erase all stored data from the Flash-ROM of the selected dome camera. You will be asked to enter ON or OFF. If you desire to erase all data then select the Erase Run, otherwise press the **ESC** key to exit without erasing. The erased data includes all stored data (auto scan, presets, and tours….) except origin offset.
The offset value is still valid after all data is erased. The offset value can be zero with default set of Offset origin menu.



PRESET FOCUS DEFAULT

This menu set the default mode of the focus when you save the preset.



FOCUS : AUTO/MANUAL/ONE PUSH

• ORIGIN OFFSET

```
        OFFSET SETUP
                      (CTRL KEY)

PAN OFFSET   : 000.0
TILT OFFSET  : 000.0
ENABLE       : OFF
SAVE AND EXIT(ESC TO CANCEL)
```

This feature is useful to align a new dome camera exactly the same as the previously installed dome camera.
Dome camera's origin set and all data initialize option do not override offset values. Only the default set option in this menu will set the offset value to zero. This can be used to avoid ceiling obstructions.

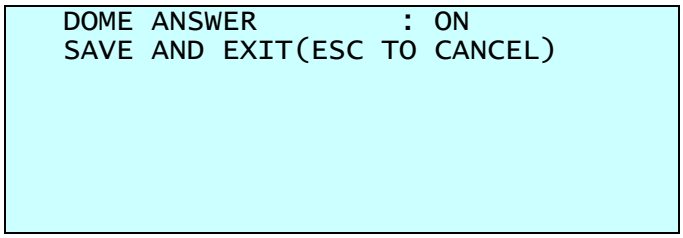
• DOME RESET

```
          DOME RESET

       ARE YOU SURE ?

           CANCEL
             OK
```

This feature is used to re-calibrate the orientation of a selected dome camera. Origin offset value is not affected by this function. (Offset is still valid after origin set)

• SYSTEM MENU

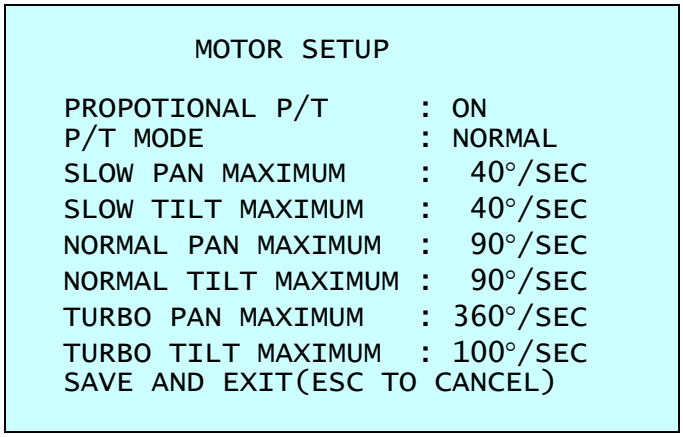
```
        SYSTEM MENU

MOTOR SETUP
PASSWORD EDIT
ORIGIN CHECK
CALIBRATION        : ON
PASSWORD ENABLE    : OFF
MENU TIME OUT      : OFF
BLINK CURSOR       : ON
```



CALIBRATION : ON (Auto origin check) / OFF
PASSWORD ENABLE : ON (requires the password to enter menu) / OFF
MENU TIME OUT : ON(5mintues) / OFF(always menu display)
BLINK CURSOR ; ON / OFF(no blinking cursor)
DOME ANSWER ; ON / OFF(no acknowledge command from the dome)
This option is helpful to escape the collision of the command using some DVR.

MOTOR SETUP

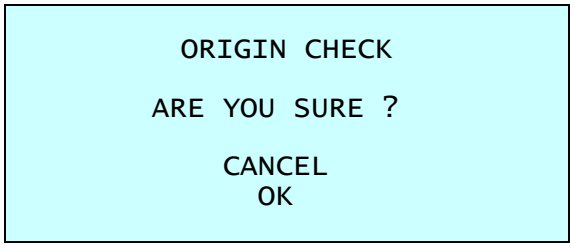
Motor Setup menu provides the pan and tilt speed of a camera. User can set the desired speed with twist the **Joystick** left or right. During operation, pressing **153** + **ON** will change the speed to the SLOW mode and pressing **153** + **OFF** will change the speed to the Normal mode.
Holding and pressing **CTRL** and moving the joystick will operate with the TURBO speed mode.



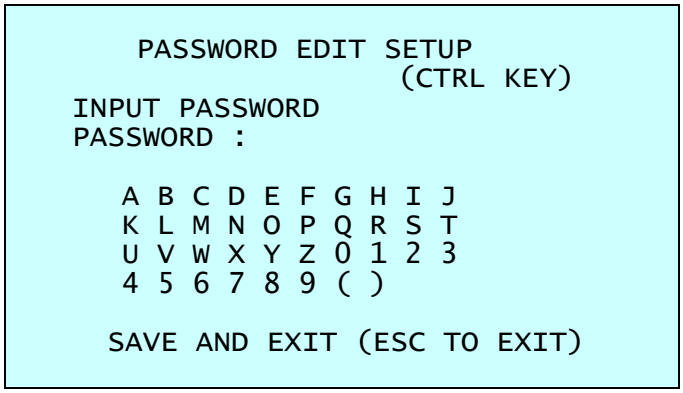
PROPOTIONAL P/T : ON / OFF
P/T MODE : SLOW / NORMAL / TURBO
SLOW PAN MAXIMUM : 19˚- 90˚/second
SLOW TILT MAXIMUM : 19˚- 90˚/ second
NORMAL PAN MAXIMUM : 40˚- 360˚/second
NORMAL TILT MAXIMUM : 40˚- 200˚/second
TURBO PAN MAXIMUM : 200˚- 380˚/second
TURBO TILT MAXIMUM : 90˚- 300˚/second

ORIGIN CHECK

When you find the wrong position of the dome during operation, execute this origin check and the dome camera will arrange the right position after the origin check operation.
Pressing **151** + **ON** will execute the origin check.

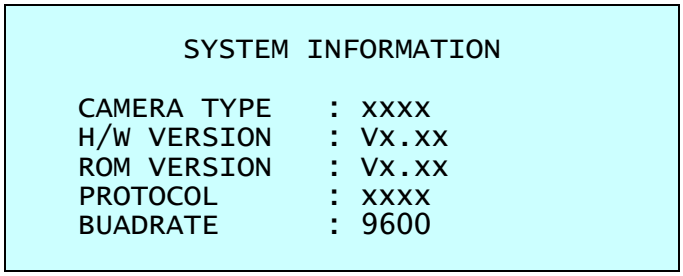


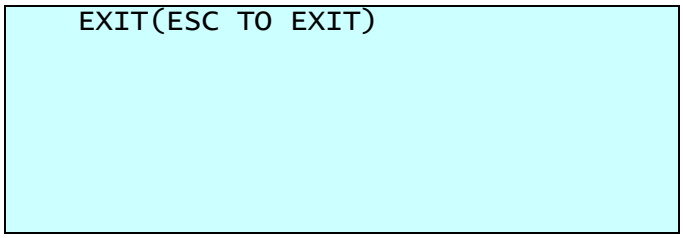
PASSWORD EDIT



You can change the password with 6-digit character in this menu.
The default password is **555555**.
When the password enable is on, the input password window displays to enter the menu.
At this time, move the cursor to the desired character by the joystick and press **CTRL** or **IRIS OPEN**.

• SYSTEM INFORMATION

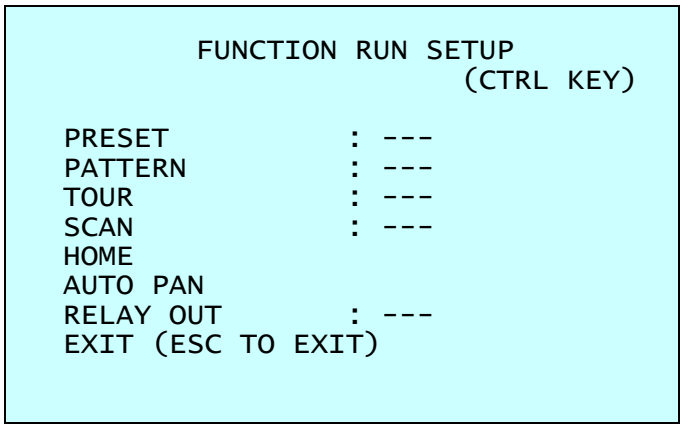




The system information provides essential information about the dome camera if service is required. When you view this screen, you can determine the camera type, ROM version. The information on this screen cannot be modified.

3.17 Function Run

This Function Run menu allows you to execute the function when you use a keyboard or a DVR without the function keys (Preset, Pattern, Tour and scan).



1. Select the desired Function by pushing **Joystick** Up or Down.
2. Select the number by twist the **Joystick** in PRESET,PATTERN,TOUR, and SCAN.
3. Press **CTRL** or **IRIS Open** to execute.

Note: To execute the function, you should save the function (PRESET, PATTERN, TOUR, and SCAN) first.

- **HOME**

Select the HOME menu and press **CTRL** key. Then dome camera goes to the default position to which the dome camera returns after an assigned period of inactivity passes. The default position may be a Preset, Tour, Pattern or no action.

- **AUTO PAN**

You can execute the endless auto pan which is to turn one direction continuously by select the Auto Pan.

- **RELAY OUT**

This function can operate only when the relay output setup has the time in the alarm menu.
Ex)

```
RELAY OUT SETUP

OUT1   : ALARM
OUT2   : 1 MIN
OUT3   : ALARM
OUT4   : 5 MIN
EXIT(ESC TO EXIT)
```

You can select OUT2 or OUT4 and press **CTRL** or **IRIS Open** then that relay operates during the setting time only.

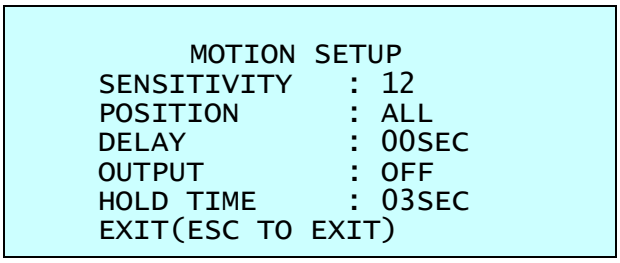
3.18 Motion Setup type 1(28x, 36x model)

The motion detection function is available in the preset mode only. After you set the motion in any preset, when you call the preset with the motion, the motion detection operates.
In the preset setup, you can set the motion setup as below.

```
        PRESET SETUP
   NUMBER   : 001
   TITLE    : ---
   CAMERA SET
   DWELL    : --- SEC
      12345678901234567890
   00 ■**----------------
   02 --------------------
   04 --------------------
   06 --------------------
NEXT PAGE
SAVE AND EXIT(ESC TO CANCEL)
```

```
PRESET CAMERA SETUP

FOCUS         : AUTO
MOTION        :OFF
MOTION SETUP
AE SETUP
SAVE AND EXIT(ESC TO EXIT)
```

To enable the motion on the preset, set MOTION to **ON**.
To enter the motion setup, push the joystick to right on the motion setup.

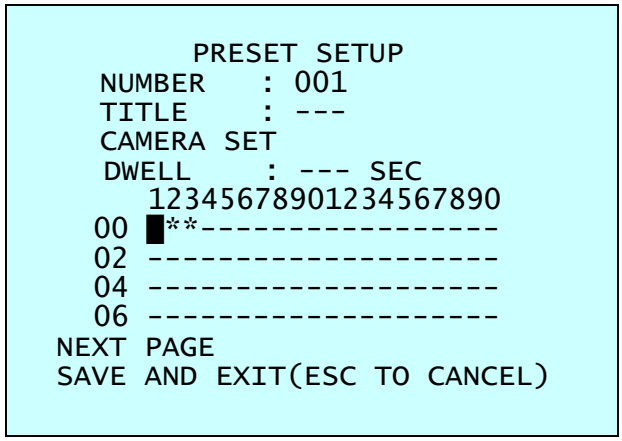


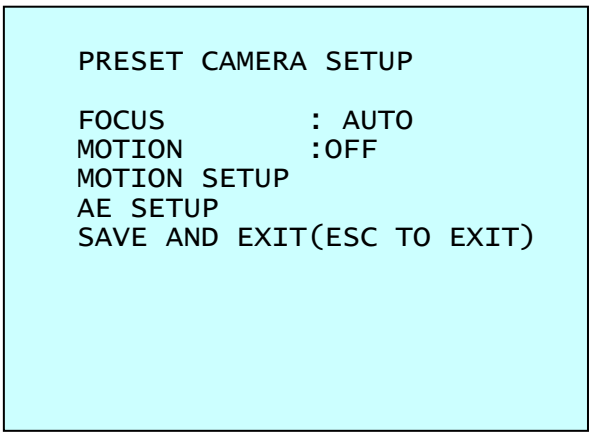
SENSITIVITY : 1-15
POSITION : ALL,CENTER(the center box displays): motion detection area.
DELAY : 00-05SEC : The delay time is used to make adjustments for scenes that have sudden changes such as lights and shadows created by headlights of nearby traffic. The motion action occurs only when the motion keeps continuously during the delay time,
OUTPUT : OFF,OUT1,OUT2,OUT3,OUT4: relay output
HOLD TIME : 03-99SEC: The hold time starts to count after the motion detects.

When a motion occurs, the dome activates the relay output, displays the message of "MOTION" on the screen, and sends the command of "ALARM 8" to the keyboard.

3.19 Motion Setup type 2 (22x model only)

The motion detection function is available in the preset mode only. After you set the motion in any preset, when you call the preset with the motion, the motion detection operates.
In the preset setup, you can set the motion setup as below.





To enable the motion on the preset, set MOTION to **ON**.
To enter the motion setup, push the joystick to right on the motion setup.

```
        MOTION SETUP
SENSITIVITY   : 12
POSITION      : ALL
DELAY         : 00SEC
OUTPUT        : OFF
HOLD TIME     : 03SEC
EXIT(ESC TO EXIT)
```

SENSITIVITY : 1-10
POSITION : ALL,CENTER(the center box displays): motion detection area.
DELAY : 00-05SEC : The delay time is used to make adjustments for scenes that have sudden changes such as lights and shadows created by headlights of nearby traffic. The motion action occurs only when the motion keeps continuously during the delay time,
OUTPUT : OFF,OUT1,OUT2,OUT3,OUT4: relay output
HOLD TIME : 03-99SEC: The hold time starts to count after the motion detects.

When a motion occurs, the dome activates the relay output, displays the message of "MOTION" on the screen, and sends the command of "ALARM 8" to the keyboard.

3.20 Motion Setup type 3 (35x model only)

The motion detection function is available in the preset mode only. After you set the motion in any preset, when you call the preset with the motion, the motion detection operates.
In the preset setup, you can set the motion setup as below.

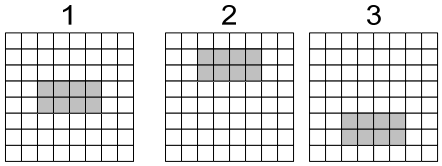
```
        PRESET SETUP
   NUMBER   : 001
   TITLE    : ---
   CAMERA SET
   DWELL    : --- SEC
      12345678901234567890
   00 **----------------
   02 --------------------
   04 --------------------
   06 --------------------
NEXT PAGE
SAVE AND EXIT(ESC TO CANCEL)
```

```
PRESET CAMERA SETUP

FOCUS         : AUTO
MOTION        :OFF
MOTION SETUP
AE SETUP
SAVE AND EXIT(ESC TO EXIT)
```

To enable the motion on the preset, set MOTION to **ON**.
To enter the motion setup, push the joystick to right on the motion setup.

```
        MOTION SETUP
SENSITIVITY   : 05
POSITION      : 01
DELAY         : 00SEC
OUTPUT        : OFF
HOLD TIME     : 03SEC
EXIT(ESC TO EXIT)
```

SENSITIVITY : 1-5
POSITION : motion detection area.(1-3)



DELAY : 00-05SEC : The delay time is used to make adjustments for scenes that have sudden changes such as lights and shadows created by headlights of nearby traffic. The motion action occurs only when the motion keeps continuously during the delay time,
OUTPUT : OFF,OUT1,OUT2,OUT3,OUT4: relay output
HOLD TIME : 03-99SEC: The hold time starts to count after the motion detects.

When a motion occurs, the dome activates the relay output, displays the message of "MOTION" on the screen, and sends the command of "ALARM 8" to the keyboard.

NOTE: When you set the motion to ON, the camera switches to the manual focus and the AE mode in the AE setup and the image stabilization, WDR, and the auto night shot function will be disabled
.

3.21 Motion Setup type 4 (28x, 37x model)

The motion detection function is available in the preset mode only. After you set the motion in any preset, when you call the preset with the motion, the motion detection operates.
In the preset setup, you can set the motion setup as below.

```
        PRESET SETUP
   NUMBER   : 001
   TITLE    : ---
   CAMERA SET
   DWELL    : --- SEC
      12345678901234567890
   00 **----------------
   02 --------------------
   04 --------------------
   06 --------------------
NEXT PAGE
SAVE AND EXIT(ESC TO CANCEL)
```

```
PRESET CAMERA SETUP

FOCUS         : AUTO
MOTION        :OFF
MOTION SETUP
AE SETUP
SAVE AND EXIT(ESC TO EXIT)
```

To enable the motion on the preset, set MOTION to **ON**.
To enter the motion setup, push the joystick to right on the motion setup.

```
        MOTION SETUP
    SENSITIVITY   : 07
    POSITION      : ALL
    DELAY         : 00SEC
    OUTPUT        : OFF
    HOLD TIME     : 03SEC
    EXIT(ESC TO EXIT)
```

SENSITIVITY : 1-10
POSITION : ALL,CENTER(the center box displays): motion detection area.
DELAY : 00-05SEC : The delay time is used to make adjustments for scenes that have sudden changes such as lights and shadows created by headlights of nearby traffic. The motion action occurs only when the motion keeps continuously during the delay time,
OUTPUT : OFF,OUT1,OUT2,OUT3,OUT4: relay output
HOLD TIME : 03-99SEC: The hold time starts to count after the motion detects.

When a motion occurs, the dome activates the relay output, displays the message of “MOTION” on the screen, and sends the command of “ALARM 8” to the keyboard.

Appendix A — Specifications

37x Optical Zoom REVO TRAX Dome System

MODEL	37X
Camera Menu Type	**4**
MODULE	
CCD Type	4.5mm (1/4 inch 960H Dual Scan CCD)
Optical / Digital Zoom	**37X / 12X**
Resolution (NTSC/PAL)	650TVL
Focal length	3.5mm~129.5mm
Angle of view	3.5mm-54.4°(H) 129.5mm-1.6°(H)
F-Number	F1.5-F4.1
Min. Illumination	
Normal	0.2 Lux
Low Shutter	0.003 Lux
ICR on	0.01 Lux
ICR on & Low Shutter	0.00001 Lux
ICR on (Day & Night)	YES
WDR	YES
Motion Detection(in PRESET)	YES
Image Stabilizer	YES
DOME	
Tilt angle	**-10° ~ 190°** (Digital Flip)
Image Flip	YES
Auto Calibration	0.1° ~ 6°
Panning angle	360 continuous rotation
Alarm (Optional)	8 inputs (NC/NO), 4 relay outputs
Auto Scan	1 auto pan & **16** auto scan capability
Preset	240 presets with individual camera AE setup
Pattern	**8** patterns (recording up to **500** sec)
Tour	8 tours (consist of 42 functions/1tour)
Max Speed	380° /sec
Area Title	it can be divided **16** areas with 12 characters of title
Privacy Zone	8 privacy zone masking (2 methods selectable : Block / video off)

* Specifications are subject to change without notice *

General	
Certification	CE EMC, FCC CLASS A, CSA
Electrical	
Input Voltage	18 to 30VAC; 24VAC nominal, 24VDC
Power Requirement	24VAC/VDC 1A
Power Consumption	Maximum 20W

Alarm Output	4 Normal relays 24VDC/1A Max. (selectable NC/NO)
Alarm Input	8 Normal dry contact (selectable NC/NO)
Control	RS-485/422 baud rate: 2400~38.4k bps (default: 9600bps)
ID (Camera Address)	999 (3999 by software setting)
Mechanical	
Dimension	See Figure below
Weight	Approx 1.2 kg
Pan Angle	360° continuous rotation
Speed	0.1° to 380°/sec. (proportional to zoom)
	380°/sec. maximum (with CTRL key pressed)
	Preset Speed: 380°/sec
Flip	180° Digital Flip or 90° Auto Flip depended on the model.
Autoscan	16 auto scan and one endless panning
Preset Position	240 positions with camera status (12-character title)
Tour	8 tours
Pattern	8 patterns, up to 500 second
Privacy Zone	8 Privacy Zones with Block or Video OFF option
On-Screen Display	Displays camera ID and area name on screen
Environment	
Operating temperature	0°C to 50°C (32°F to 122°F)
Operating humidity	0 to 90%RH (non-condensing)
Storage temperature	-20°C to 60°C (4°F to 140°F)

Specifications are subject to change without notice.

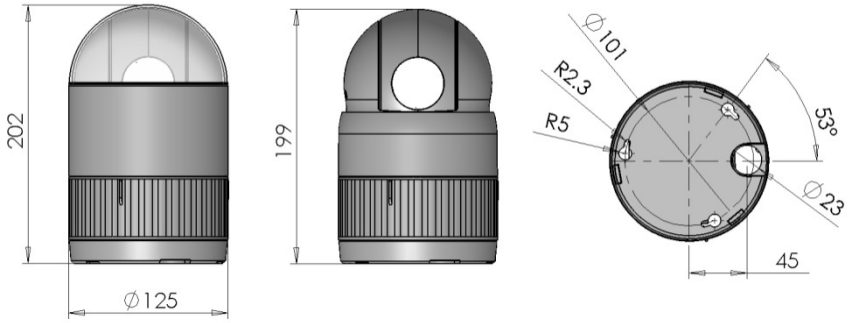


Figure 11 – Dimension

Appendix B — Troubleshooting

If problems occur, verify the installation of the camera with the instructions in this manual and with other operating equipment. Isolate the problem to the specific piece of equipment in the system and refer to the equipment manual for further information.

Problem	Possible Solution
No video.	Verify that power is connected to all pieces of equipment in the system. Verify that the power switches are in the ON position. Check the video connections
Poor video quality.	Check that the BNC connectors are inserted properly. Check the voltage level of the dome camera. Check that 8-pin cable is connected to the Keyboard. 8-pin cable for Keyboard is proprietary. Cable for video is shielded.
Dome cameras lose their positions.	Reset the cameras using the Dome configuration menus. Check that the dome cameras are inserted properly in the base. Check the voltage level of the dome camera.
Camera number does not match the multiplexer number.	Check the camera ID and insert the BNC cable into the proper input of the multiplexer.
Picture is torn when switching	Check Line Lock setting and adjust phase of L/L

Appendix C — Glossary

Alarm Actions

The assigned responses for the dome camera when inputs change from normal to abnormal states. The dome may run a Preset, Pattern, or have no assigned action for each of the four dome inputs. The dome may also send alarm states to the host controller for processing. See also Input and Normal Input State.

Areas

Programmed start and end points of the dome's field of view around its pan axis.
Each area is a part of a circular viewing area that extends around the dome. The areas can be different sizes. Up to 16 areas can be programmed for the dome.

Automatic Gain Control (AGC)

Allows for the amplification of the video signal in scenes with minimal ambient light. Many low-light scenes result in picture noise. As gain is increased, the picture noise is also amplified. When AGC is enabled, the value of the gain setting is based on feedback from the camera. When AGC is disabled, the camera uses the value set for the manual gain setting. The trade-off between picture level and noise may be adjusted when AGC is disabled.

On-screen Menu

The text overlay menu system used for setting dome features. The utility is accessed using a keystroke combination. The utility provides settings for camera functions, zoom, alarms, text display, and password protection.

Flip

Allows the dome to automatically turn 180 degrees when the camera tilts to its lower limit and stays in that position for a brief delay. When the dome flips (rotates), the camera starts moving upward as long as the tilt control is kept in the down position. Once the control is released, the tilt control returns to its normal operational mode. The flip feature is useful when you need to track someone who walks directly beneath the dome and continues on the other side.

Home Position

The default position to which the dome camera returns after an assigned period of inactivity passes. The default position may be a Preset, Tour, Pattern, or No Action.

Input Alarm

A connection point on the dome camera that enables the system to monitor Input Devices. There are four inputs available for the dome camera.

Input Devices

External devices that provide information about the condition of system components that connect to the inputs on the dome camera. Typical input devices include door contacts, motion detectors and smoke detectors.

IR Mode

A feature of the camera that permits manual or automatic switching between color and IR (black-and-white) operation. When IR mode is active, clearer images may be obtained under low-light conditions.

Line Lock

Allows you to phase lock the video with the AC power line. When line lock is enabled, it prevents vertical video rolling when switching multiple cameras to a single monitor. If text appears slightly tinted on color monitors, disabling the line lock may prevent this problem.

Name Information

Relates to the display the dome name, the area where the dome is pointing, the name of the preset or pattern that is running, and alarm names. The display of each type of name setting can be enabled or disabled. When the display of camera or area title(name) is enabled, the information appears on the screen continuously. Preset, tour and pattern titles(names) appear only while they are active.

Normal Input State

Describes the expected state of a device connected to one of eight dome camera’s inputs. The normal state may be open or closed. When a device is not in its normal input state, an alarm is issued.

North Position

User-definable setting that may correspond to magnetic north or some well-known landmark. Used to approximate the camera dome's pointing direction when Direction Indicators are enabled.

Slow Shutter

Setting used to improve the quality of video obtained in extreme low-light situations. When the Low Shutter setting is enabled, low-light information is collected over multiple fields based on the Shutter Limit setting. As a result, video may appear blurred or choppy in extreme low-light situations. This setting does not effect camera operation in normal lighting situations.

Pattern

A series of pan, tilt, zoom and focus movements from a single programmable dome. Up to 8 patterns may be programmed for the dome camera.

Preset

Programmed video scene, based on a specific pan, tilt, zoom, and focus settings. Up to 240 presets may be programmed for the dome camera.

Privacy Zones

Masked areas of the dome camera's viewing area. These masks prevent operators of the surveillance system from viewing these designated zones. The Privacy Zones move in relation to the dome camera’s pan/tilt position. In addition, the apparent size of the Privacy Zone adjusts automatically as the lens zooms in or out. Up to eight Privacy Zones may be established for a dome camera.

Shutter Limit

Setting used to define the maximum exposure time for the Open Shutter setting. The values for the setting range from 1/2 to 1/60. The default setting is 1/4.

Vector Scan

Move from start point to end point including tilt and zoom simultaneously and linearly.

White balance

Adjustments in the color hue(red and blue) gains for a camera so that true white appears white in the image. It is normally compensated for by the automatic gain control. In some lighting conditions, you may need to manually adjust the red and blue settings for optimal viewing. When Automatic White Balance is enabled, the camera measures the image and automatically adjusts the red and blue settings to balance white. When Automatic White Balance is disabled, the camera uses the values set for the red and blue settings to balance white.

Appendix D — Short Cut Key

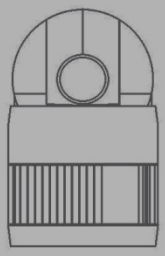
Short Cut Key	Function		
PRST	Pop up preset setup menu.		
TOUR	Pop up Tour setup menu.		
PTRN	Pop up Pattern setup menu.		
SCAN	Pop up Auto Scan setup menu.		
NO.+ PGM +PRST	Store the current view at the selected number.		
Short Cut Key	**Function**	**Short Cut Key**	**Function**
1 + ON	Turn On Relay 1.	1 + OFF	Turn Off Relay.
2 + ON	Turn On Relay 2.	2 + OFF	Turn Off Relay.
3 + ON	Turn On Relay 3.	3 + OFF	Turn Off Relay.
4 + ON	Turn On Relay 4.	4 + OFF	Turn Off Relay.
7 + ON	Change FOCUS to AUTO	7 + OFF	Change FOCUS to manual
8 + ON	Change AE to AUTO	8 + OFF	Change AE to manual
9 + ON	Change Night Shot to AUTO		
10 + ON	Night Shot on (go to the manual mode)	10 + OFF	Night Shot off (go to the manual mode)
11 + ON	BLC on (AE auto mode)	11 + OFF	BLC off (AE auto mode)
12 + ON	Digital Zoom on (According to digital zoom setting)	12 + OFF	Digital Zoom off
13 + ON	Dome OSD on	13 + OFF	Dome OSD off
14 + ON	Dome Area Title Display on	14 + OFF	Dome Area Title Display off
15 + ON	View Direction on	15 + OFF	View Direction off
100 + ON	Shutter speed auto		
101 + ON	Shutter speed 1/4(PAL 1/3)sec		
102 + ON	Shutter speed 1/2 sec		
103 + ON	Shutter speed 1 sec		
104 + ON	WDR ON	104 + OFF	WDR off
105 + ON	Image Stabilizer ON	105 + OFF	Image Stabilizer off
150 + ON	Image Flip ON	150 + OFF	Image Flip off
151 + ON	Origin Check		
152 + ON	Place the camera in the 0° area horizontally.		

* Some function may not operate according to the model.

Short Cut Key	Function	Short Cut Key	Function
153 + **ON**	Go to the slow speed mode	**153** + **OFF**	Go to the normal speed mode
154 + **ON**	Display System Information		
155 + **ON**	Flip the camera in the 180° area horizontally.		
250 + **PRESET**	Set the dome ID up to 3999		
888 + **ENTER**	Night Shot on (in the global mode only)		
999 + **ENTER**	Night Shot off (in the global mode only)		

* Some function may not operate according to the model.

- MEMO -



REVO TRAX
Speed Dome Camera

REV.A